

## Expression of Genes in Human Heart

Table 4 (413 pages) presents expression, homology, and functional information for the genome-derived single, exon  
5 probes that are expressed significantly in human heart.

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Table 4  
Single Exon Probes Expressed in Heart

| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|--------------------|
| 442                    | 10386                 | 20209             | 4.41                 |                                               |                          |                               |                    |
| 871                    | 10797                 | 20647             | 17.08                |                                               |                          |                               |                    |
| 1029                   | 10947                 |                   | 2.14                 |                                               |                          |                               |                    |
| 1280                   | 11188                 | 21039             | 7.97                 |                                               |                          |                               |                    |
| 1597                   | 11501                 | 21361             | 1.87                 |                                               |                          |                               |                    |
| 1619                   | 11523                 | 21381             | 4.97                 |                                               |                          |                               |                    |
| 1694                   | 11596                 | 21467             | 1.01                 |                                               |                          |                               |                    |
| 1715                   | 11616                 | 21485             | 0.95                 |                                               |                          |                               |                    |
| 1721                   | 11622                 | 21491             | 7.45                 |                                               |                          |                               |                    |
| 1848                   | 11744                 | 21620             | 0.98                 |                                               |                          |                               |                    |
| 1935                   | 11830                 | 21713             | 3.03                 |                                               |                          |                               |                    |
| 2119                   | 12008                 | 21907             | 2.62                 |                                               |                          |                               |                    |
| 2233                   | 12118                 | 22020             | 2.34                 |                                               |                          |                               |                    |
| 3149                   | 13074                 | 22875             | 3.7                  |                                               |                          |                               |                    |
| 3403                   | 13320                 | 23121             | 1.52                 |                                               |                          |                               |                    |
| 3471                   | 13387                 | 23192             | 8.97                 |                                               |                          |                               |                    |
| 3513                   | 13429                 |                   | 0.87                 |                                               |                          |                               |                    |
| 3607                   | 13521                 | 23309             | 0.99                 |                                               |                          |                               |                    |
| 4102                   | 14002                 | 23781             | 1.71                 |                                               |                          |                               |                    |
| 4164                   | 14064                 | 23838             | 5.94                 |                                               |                          |                               |                    |
| 4184                   | 14084                 | 23858             | 0.89                 |                                               |                          |                               |                    |
| 4184                   | 14084                 | 23859             | 0.89                 |                                               |                          |                               |                    |
| 4242                   | 14141                 |                   | 1.03                 |                                               |                          |                               |                    |
| 4730                   | 14616                 | 24402             | 1.76                 |                                               |                          |                               |                    |
| 4779                   | 14663                 |                   | 0.78                 |                                               |                          |                               |                    |
| 4976                   | 14851                 | 24617             | 5.08                 |                                               |                          |                               |                    |
| 4988                   | 14863                 | 24629             | 2.07                 |                                               |                          |                               |                    |
| 5217                   | 15140                 | 24834             | 1.92                 |                                               |                          |                               |                    |
| 5217                   | 15140                 | 24835             | 1.92                 |                                               |                          |                               |                    |
| 5328                   | 15248                 |                   | 5                    |                                               |                          |                               |                    |
| 5436                   | 15356                 |                   | 5.89                 |                                               |                          |                               |                    |
| 5483                   | 15248                 |                   | 4.9                  |                                               |                          |                               |                    |
| 5509                   | 15427                 | 25490             | 2.9                  |                                               |                          |                               |                    |
| 5668                   | 19451                 | 25678             | 1.6                  |                                               |                          |                               |                    |

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|------------------------|-----------------------|-------------------|----------------------|----------------------------------------------|--------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5690                   | 15599                 | 25700             | 1.41                 |                                              |                          |                               |                                                                                                                                                                  |
| 5863                   | 15769                 |                   | 1.84                 |                                              |                          |                               |                                                                                                                                                                  |
| 6382                   | 16244                 | 26404             | 1.61                 |                                              |                          |                               |                                                                                                                                                                  |
| 6382                   | 16244                 | 26405             | 1.61                 |                                              |                          |                               |                                                                                                                                                                  |
| 6697                   | 16577                 | 26769             | 1.29                 |                                              |                          |                               |                                                                                                                                                                  |
| 6842                   | 16820                 | 27012             | 1.3                  |                                              |                          |                               |                                                                                                                                                                  |
| 7494                   | 17364                 | 27569             | 3.58                 |                                              |                          |                               |                                                                                                                                                                  |
| 7684                   | 17534                 | 27758             | 1.26                 |                                              |                          |                               |                                                                                                                                                                  |
| 8070                   | 17961                 |                   | 3.7                  |                                              |                          |                               |                                                                                                                                                                  |
| 8219                   | 19472                 | 28355             | 2.31                 |                                              |                          |                               |                                                                                                                                                                  |
| 8390                   | 18266                 |                   | 2.84                 |                                              |                          |                               |                                                                                                                                                                  |
| 8666                   | 18555                 | 28840             | 2.91                 |                                              |                          |                               |                                                                                                                                                                  |
| 8757                   | 17906                 | 28150             | 1.73                 |                                              |                          |                               |                                                                                                                                                                  |
| 8757                   | 17906                 | 28151             | 1.73                 |                                              |                          |                               |                                                                                                                                                                  |
| 8792                   | 18606                 |                   | 2.19                 |                                              |                          |                               |                                                                                                                                                                  |
| 9464                   | 19094                 |                   | 1.62                 |                                              |                          |                               |                                                                                                                                                                  |
| 9760                   | 19280                 | 25230             | 2.11                 |                                              |                          |                               |                                                                                                                                                                  |
| 5691                   | 15600                 | 25701             | 13.31                | 9.9E+00                                      | AJ239028.1               | NT                            | Homo sapiens LSS gene, partial, exons 15, 16, 17 and 18                                                                                                          |
| 6669                   | 16549                 | 26745             | 1.54                 | 9.8E+00                                      | U32716.1                 | NT                            | Haemophilus influenzae Rd section 31 of 163 of the complete genome                                                                                               |
| 7955                   | 17805                 | 28046             | 1.32                 | 9.6E+00                                      | AF242432.1               | NT                            | Mus musculus Naip3 gene, exon 1; neuronal apoptosis inhibitory protein 1 (Naip1) and general transcription factor IIH polypeptide 2 (Gtf2h2) genes, complete cds |
| 7955                   | 17805                 | 28047             | 1.32                 | 9.6E+00                                      | AF242432.1               | NT                            | Mus musculus Naip3 gene, exon 1; neuronal apoptosis inhibitory protein 1 (Naip1) and general transcription factor IIH polypeptide 2 (Gtf2h2) genes, complete cds |
| 2631                   | 12499                 | 22389             | 2.72                 | 9.4E+00                                      | L11433.1                 | NT                            | Dengue virus type 3 membrane protein (prM/M)/envelope glycoprotein (E) polyprotein mRNA, partial cds                                                             |
| 2631                   | 12499                 | 22390             | 2.72                 | 9.4E+00                                      | L11433.1                 | NT                            | Dengue virus type 3 membrane protein (prM/M)/envelope glycoprotein (E) polyprotein mRNA, partial cds                                                             |
| 2893                   | 12820                 | 22612             | 5.91                 | 9.4E+00                                      | AB043785.1               | NT                            | Mus musculus A73 gene for antithrombin, complete cds                                                                                                             |
| 7206                   | 17083                 | 27271             | 2.97                 | 9.3E+00                                      | P11210                   | SWISSPROT                     | IMMEDIATE-EARLY PROTEIN 1 (IE1) (IMMEDIATE-EARLY PHOSPHOPROTEIN PP89)                                                                                            |
| 5239                   | 15163                 | 24932             | 2.07                 | 9.1E+00                                      | AF095609.1               | NT                            | Leuciscus cephalus orientalis cytochrome b (cyt b) gene, partial cds; mitochondrial gene for mitochondrial product                                               |
| 5239                   | 15163                 | 24933             | 2.07                 | 9.1E+00                                      | AF095609.1               | NT                            | Leuciscus cephalus orientalis cytochrome b (cyt b) gene, partial cds; mitochondrial gene for mitochondrial product                                               |
| 5678                   | 15587                 | 25687             | 5.51                 | 8.9E+00                                      | BE971806.1               | EST_HUMAN                     | 601661038R1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:3934592 3'                                                                                                  |

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|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------|
| 5848                   | 15754                 | 25871             | 1.71                 | 8.7E+00                                       | AB019788.1               | NT                            | Cynops pyrthogaster CpTbx3 premature mRNA, partial cds                                                           |
| 5848                   | 15754                 | 25872             | 1.71                 | 8.7E+00                                       | AB019788.1               | NT                            | Cynops pyrthogaster CpTbx3 premature mRNA, partial cds                                                           |
| 433                    | 10378                 | 20199             | 1.75                 | 8.4E+00                                       | 5031804                  | NT                            | Homo sapiens insulin receptor substrate 1 (IRS1) mRNA                                                            |
| 7439                   | 16452                 | 26642             | 3.68                 | 8.1E+00                                       | AJ131719.1               | NT                            | Zea mays mRNA for legumain-like protease (see2a)                                                                 |
| 8509                   | 18381                 |                   | 2.31                 | 8.0E+00                                       | P41820                   | SWISSPROT                     | BREFELDIN A RESISTANCE PROTEIN                                                                                   |
| 6346                   | 16209                 |                   | 2.07                 | 7.5E+00                                       | AL445065.1               | NT                            | Thermoplasma acidophilum complete genome; segment 3/5                                                            |
| 6868                   | 16747                 | 26940             | 1.53                 | 7.5E+00                                       | P35441                   | SWISSPROT                     | THROMBOSPONDIN 1 PRECURSOR                                                                                       |
| 6868                   | 16747                 | 26941             | 1.53                 | 7.5E+00                                       | P35441                   | SWISSPROT                     | THROMBOSPONDIN 1 PRECURSOR                                                                                       |
| 5544                   | 15460                 | 25531             | 2.58                 | 7.4E+00                                       | BF700517.1               | EST_HUMAN                     | 602128876F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4285506 5'                                                  |
| 7085                   | 16662                 | 27155             | 3.83                 | 7.4E+00                                       | P04929                   | SWISSPROT                     | HISTIDINE-RICH GLYCOPROTEIN PRECURSOR                                                                            |
| 7085                   | 16962                 | 27156             | 3.83                 | 7.4E+00                                       | P04929                   | SWISSPROT                     | HISTIDINE-RICH GLYCOPROTEIN PRECURSOR                                                                            |
| 2947                   | 12874                 | 22671             | 4.2                  | 7.2E+00                                       | L12051.1                 | NT                            | Lycopersicon esculentum Mill. GTPase (SAR2) mRNA, complete cds                                                   |
| 2947                   | 12874                 | 22672             | 4.2                  | 7.2E+00                                       | L12051.1                 | NT                            | Lycopersicon esculentum Mill. GTPase (SAR2) mRNA, complete cds                                                   |
| 6239                   | 16105                 | 26254             | 1.3                  | 7.1E+00                                       | P28166                   | SWISSPROT                     | ZINC-FINGER PROTEIN 1 (ZINC-FINGER HOMEODOMAIN PROTEIN 1)                                                        |
| 6239                   | 16105                 | 26255             | 1.3                  | 7.1E+00                                       | P28166                   | SWISSPROT                     | ZINC-FINGER PROTEIN 1 (ZINC-FINGER HOMEODOMAIN PROTEIN 1)                                                        |
| 7535                   | 17386                 |                   | 8.48                 | 7.1E+00                                       | AL161595.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 91                                                    |
| 8690                   | 18577                 | 28860             | 3.26                 | 7.1E+00                                       | P05850                   | SWISSPROT                     | HYPOTHETICAL 17.3 KDA PROTEIN IN MRDA-PHPB INTERGENIC REGION                                                     |
| 7735                   | 17585                 | 27809             | 2.98                 | 7.0E+00                                       | P48610                   | SWISSPROT                     | ARGININE KINASE (AK)                                                                                             |
| 8575                   | 18443                 | 28712             | 1.85                 | 7.0E+00                                       | O22469                   | SWISSPROT                     | WD-40 REPEAT PROTEIN MS13                                                                                        |
| 6818                   | 16897                 | 26889             | 2.72                 | 6.9E+00                                       | P36679                   | SWISSPROT                     | 60S RIBOSOMAL PROTEIN L4 (L2)                                                                                    |
| 7925                   | 17775                 | 28015             | 1.3                  | 6.9E+00                                       | P44834                   | SWISSPROT                     | DNA MISMATCH REPAIR PROTEIN MUTS                                                                                 |
| 6614                   | 16494                 | 26680             | 1.45                 | 6.8E+00                                       | W03412.1                 | EST_HUMAN                     | za07c11.1 Scates melanocyte 2NbhM Homo sapiens cDNA clone IMAGE:291860 5'                                        |
| 6614                   | 16494                 | 26681             | 1.45                 | 6.8E+00                                       | W03412.1                 | EST_HUMAN                     | za07c11.1 Scates melanocyte 2NbhM Homo sapiens cDNA clone IMAGE:291860 5'                                        |
| 7277                   | 17154                 |                   | 1.47                 | 6.8E+00                                       | P36307                   | SWISSPROT                     | OUTER CAPSID PROTEIN VP4 (HEMAGGLUTININ) (OUTER LAYER PROTEIN VP4) [CONTAINS: OUTER CAPSID PROTEINS VP5 AND VP8] |
| 7863                   | 17713                 | 27957             | 3.82                 | 6.8E+00                                       | Q03570                   | SWISSPROT                     | HYPOTHETICAL 157.0 KDA PROTEIN C38C10.5 IN CHROMOSOME III                                                        |
| 7796                   | 17646                 | 27881             | 2.1                  | 6.6E+00                                       | Q9ZE07                   | SWISSPROT                     | URIDYLATE KINASE (UK) (URIDINE MONOPHOSPHATE KINASE) (UMP KINASE)                                                |
| 7796                   | 17646                 | 27882             | 2.1                  | 6.6E+00                                       | Q9ZE07                   | SWISSPROT                     | URIDYLATE KINASE (UK) (URIDINE MONOPHOSPHATE KINASE) (UMP KINASE)                                                |
| 8471                   | 18344                 |                   | 2.17                 | 6.6E+00                                       | Q10309                   | SWISSPROT                     | PROBABLE CATION-TRANSPORTING ATPASE C6C3.05C                                                                     |
| 7296                   | 17172                 | 27372             | 8.32                 | 6.5E+00                                       | P03374                   | SWISSPROT                     | ENV POLYPROTEIN [CONTAINS: COAT PROTEIN GP52; COAT PROTEIN GP36]                                                 |
| 7616                   | 17467                 | 27686             | 1.44                 | 6.2E+00                                       | AY010901.1               | NT                            | Schizophyllum commune unknown mRNA                                                                               |
| 5928                   | 15833                 | 25956             | 7.16                 | 5.9E+00                                       | AF155142.1               | NT                            | Mus musculus mixed lineage kinase 3 (Mlk3) and two pore domain K+ channel subunit (Kcnk6) genes, complete cds    |
| 3479                   | 13395                 |                   | 0.81                 | 5.8E+00                                       | 7661557                  | NT                            | Homo sapiens DESCI1 protein (DESCI1), mRNA                                                                       |

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|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 8770                   | 17919                 | 28166             | 2.44                 | 5.6E+00                                       | Q55276                   | SWISSPROT                     | LYCOPENE BETA CYCLASE                                                                                                    |
| 8769                   | 17918                 | 28165             | 2.65                 | 5.5E+00                                       | P11990                   | SWISSPROT                     | PNEUMOLYSIN (THIOL-ACTIVATED CYTOLYSIN)                                                                                  |
| 8967                   | 18773                 |                   | 1.94                 | 5.5E+00                                       | AL161571.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 67                                                            |
| 6593                   | 16473                 |                   | 1.62                 | 5.4E+00                                       | Q91062                   | SWISSPROT                     | VITELLOGENIN PRECURSOR (VTG) [CONTAINS: LIPOVITELLIN LV-1N; LIPOVITELLIN LV-1C;                                          |
| 7769                   | 17619                 | 27849             | 1.44                 | 5.4E+00                                       | Q17094                   | SWISSPROT                     | LIPOVITELLIN LV-2]                                                                                                       |
| 7769                   | 17619                 | 27850             | 1.44                 | 5.4E+00                                       | Q17094                   | SWISSPROT                     | RHODOPSIN                                                                                                                |
| 4675                   | 14561                 | 24354             | 1.54                 | 5.3E+00                                       | L43126.1                 | NT                            | RHODOPSIN                                                                                                                |
| 6710                   | 16590                 |                   | 4.04                 | 5.3E+00                                       | P54098                   | SWISSPROT                     | Bovine immunodeficiency-like virus surface envelope gene, 5' end of cds                                                  |
| 8899                   | 18708                 | 29003             | 3.21                 | 5.3E+00                                       | Q27905                   | SWISSPROT                     | DNA POLYMERASE GAMMA (MITOCHONDRIAL DNA POLYMERASE CATALYTIC SUBUNIT)                                                    |
| 7655                   | 17505                 | 27730             | 1.21                 | 5.1E+00                                       | P09182                   | SWISSPROT                     | PROBABLE ANTIBACTERIAL PEPTIDE POLYPROTEIN PRECURSOR                                                                     |
| 7959                   | 17809                 | 28050             | 3.06                 | 5.0E+00                                       | AF162445.2               | NT                            | COLICIN N IMMUNITY PROTEIN (MICROCIN N IMMUNITY PROTEIN)                                                                 |
| 8610                   | 18477                 | 28749             | 10.53                | 5.0E+00                                       | Z83860.1                 | NT                            | Canis familiaris skeletal muscle chloride channel ClC-1 (CLCN1) mRNA, complete cds                                       |
| 3972                   | 13879                 |                   | 9.43                 | 4.8E+00                                       | AF185255.1               | NT                            | Mycobacterium tuberculosis H37Rv complete genome; segment 103/162                                                        |
| 6970                   | 18847                 |                   | 5.01                 | 4.8E+00                                       | AW150067.1               | EST_HUMAN                     | Emuice australis histone H3 (H3) gene, partial cds                                                                       |
| 286                    | 10251                 | 20071             | 2.03                 | 4.7E+00                                       | BF240552.1               | EST_HUMAN                     | PMO-BT0547-310100-002-b04 BT0547 Homo sapiens cDNA                                                                       |
| 287                    | 10251                 | 20071             | 1.92                 | 4.7E+00                                       | BF240552.1               | EST_HUMAN                     | 601875654F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4099716 5'                                                          |
| 3236                   | 13160                 | 22958             | 4.01                 | 4.7E+00                                       | AL163280.2               | NT                            | 601875654F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4099716 5'                                                          |
| 6576                   | 16434                 | 26617             | 1.48                 | 4.6E+00                                       | U67569.1                 | NT                            | Homo sapiens chromosome 21 segment HS21C080                                                                              |
| 8881                   | 18693                 | 28986             | 1.99                 | 4.5E+00                                       | AE001044.1               | NT                            | Methanococcus jannaschii section 111 of 150 of the complete genome                                                       |
| 3003                   | 12931                 | 22723             | 0.96                 | 4.4E+00                                       | BF530893.1               | EST_HUMAN                     | Archaeoglobus fulgidus section 63 of 172 of the complete genome                                                          |
| 3003                   | 12931                 | 22724             | 0.96                 | 4.4E+00                                       | BF530893.1               | EST_HUMAN                     | 602072585F1 NCL_CGAP_Brm67 Homo sapiens cDNA clone IMAGE:4215284 5'                                                      |
| 5764                   | 15671                 |                   | 1.55                 | 4.4E+00                                       | X13414.1                 | NT                            | 602072585F1 NCL_CGAP_Brm67 Homo sapiens cDNA clone IMAGE:4215284 5'                                                      |
| 6398                   | 16259                 | 26420             | 2.01                 | 4.3E+00                                       | Y13402.1                 | NT                            | Murine I gene for MHC class II (Ia) associated invariant chain                                                           |
| 8235                   | 18116                 | 28368             | 7.49                 | 4.3E+00                                       | AF240786.1               | NT                            | Plasmodium falciparum R29R+var1 gene, exon 1                                                                             |
| 5387                   | 15306                 |                   | 2.92                 | 4.2E+00                                       | P18444                   | SWISSPROT                     | Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds |
| 6060                   | 16043                 | 26186             | 1.57                 | 4.2E+00                                       | P13983                   | SWISSPROT                     | MICROSOMAL DIPEPTIDASE PRECURSOR (MDP) (DEHYDROPEPTIDASE-I) (RENAL DIPEPTIDASE) (RDP)                                    |
| 6060                   | 16043                 | 26187             | 1.57                 | 4.2E+00                                       | P13983                   | SWISSPROT                     | EXTENSIN PRECURSOR (CELL WALL HYDROXYPROLINE-RICH GLYCOPROTEIN)                                                          |
| 7182                   | 17059                 | 27249             | 5.45                 | 4.2E+00                                       | AI809013.1               | EST_HUMAN                     | EXTENSIN PRECURSOR (CELL WALL HYDROXYPROLINE-RICH GLYCOPROTEIN)                                                          |
| 6517                   | 16376                 | 26553             | 7.65                 | 4.1E+00                                       | Q23810                   | SWISSPROT                     | wf67g03.x1 Soares_NFL_I_GBC_S1 Homo sapiens cDNA clone IMAGE:2360692 3'                                                  |
| 6577                   | 16435                 | 26618             | 3.31                 | 4.1E+00                                       | P28864                   | SWISSPROT                     | YY1 PROTEIN PRECURSOR                                                                                                    |
| 6577                   | 16435                 | 26619             | 3.31                 | 4.1E+00                                       | P28864                   | SWISSPROT                     | GENE 88 PROTEIN                                                                                                          |
| 6577                   | 16435                 | 26619             | 3.31                 | 4.1E+00                                       | P28864                   | SWISSPROT                     | GENE 88 PROTEIN                                                                                                          |

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|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6617                   | 16497                 | 26684             | 2.95                 | 4.1E+00                                       | U57503.1                 | NT                            | Pan troglodytes novel repetitive solo LTR element in the RNU2 locus                                                                                                                                                                          |
| 7576                   | 17427                 | 27641             | 2.31                 | 4.1E+00                                       | BF692425.1               | EST_HUMAN                     | 602247938F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4333209 5'                                                                                                                                                                              |
| 8259                   | 18139                 |                   | 2.89                 | 4.1E+00                                       | P09716                   | SWISSPROT                     | HYPOTHETICAL PROTEIN HVL1F1                                                                                                                                                                                                                  |
| 8339                   | 18216                 |                   | 12.46                | 4.1E+00                                       | BE885880.1               | EST_HUMAN                     | 601507510F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3909051 5'                                                                                                                                                                              |
| 9672                   | 19231                 | 25241             | 1.86                 | 4.1E+00                                       | P47876                   | SWISSPROT                     | INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 1 PRECURSOR (IGFBP-1) (IGF-BINDING PROTEIN 1)                                                                                                                                                     |
| 6266                   | 16131                 | 26285             | 1.37                 | 4.0E+00                                       | O33010                   | SWISSPROT                     | CELL DIVISION PROTEIN FTSY HOMOLOG                                                                                                                                                                                                           |
| 8768                   | 17917                 | 28164             | 2.17                 | 4.0E+00                                       | P14546                   | SWISSPROT                     | CYTOCHROME C OXIDASE POLYPEPTIDE III                                                                                                                                                                                                         |
| 8835                   | 18648                 | 28934             | 3.34                 | 4.0E+00                                       | P07564                   | SWISSPROT                     | GENOME POLYPROTEIN [CONTAINS: CAPSID PROTEIN C (CORE PROTEIN); MATRIX PROTEIN (ENVELOPE GLYCOPROTEIN M); MAJOR ENVELOPE PROTEIN E; NONSTRUCTURAL PROTEINS NS1, NS2A, NS2B, NS4A AND NS4B; HELICASE (NS3); RNA-DIRECTED RNA POLYMERASE (NS5)] |
| 8835                   | 18648                 | 28935             | 3.34                 | 4.0E+00                                       | P07564                   | SWISSPROT                     | GENOME POLYPROTEIN [CONTAINS: CAPSID PROTEIN C (CORE PROTEIN); MATRIX PROTEIN (ENVELOPE GLYCOPROTEIN M); MAJOR ENVELOPE PROTEIN E; NONSTRUCTURAL PROTEINS NS1, NS2A, NS2B, NS4A AND NS4B; HELICASE (NS3); RNA-DIRECTED RNA POLYMERASE (NS5)] |
| 3459                   | 13375                 | 23181             | 3.89                 | 3.9E+00                                       | X64518.1                 | NT                            | N. labacum chitinase gene 50 for class I chitinase C                                                                                                                                                                                         |
| 4226                   | 14124                 |                   | 0.99                 | 3.9E+00                                       | AF055466.1               | NT                            | Mus musculus seminal vesicle secretory protein 99 (MSVSP99) gene, promoter region                                                                                                                                                            |
| 5471                   | 15391                 | 25454             | 2.47                 | 3.9E+00                                       | BE814357.1               | EST_HUMAN                     | MRO-BN0070-300500-028-H05 BN0070 Homo sapiens cDNA                                                                                                                                                                                           |
| 5471                   | 15391                 | 25455             | 2.47                 | 3.9E+00                                       | BE814357.1               | EST_HUMAN                     | MRO-BN0070-300500-028-H05 BN0070 Homo sapiens cDNA                                                                                                                                                                                           |
| 6108                   | 16002                 | 26140             | 4.46                 | 3.9E+00                                       | P39299                   | SWISSPROT                     | HYPOTHETICAL TRANSCRIPTIONAL REGULATOR IN AIDB-RPSF INTERGENIC REGION                                                                                                                                                                        |
| 6355                   | 16218                 | 26379             | 4.68                 | 3.9E+00                                       | M23907.1                 | NT                            | Human MHC class II lymphocyte antigen (DPw4-beta-1) gene, exon 2                                                                                                                                                                             |
| 6840                   | 16719                 | 26913             | 2.32                 | 3.9E+00                                       | X65865.1                 | NT                            | X. laevis mRNA for M4 muscarinic receptor                                                                                                                                                                                                    |
| 8695                   | 17879                 | 28120             | 3.09                 | 3.9E+00                                       | Y18000.1                 | NT                            | Homo sapiens NF2 gene                                                                                                                                                                                                                        |
| 8715                   | 18532                 | 28816             | 5.58                 | 3.9E+00                                       | AA661489.1               | EST_HUMAN                     | nr18a12.s1 NCL CGAP_Ew1 Homo sapiens cDNA clone IMAGE:1168318 similar to gb.A10416                                                                                                                                                           |
| 2588                   | 12459                 |                   | 2.4                  | 3.8E+00                                       | AE001562.1               | NT                            | METALLOPROTEINASE INHIBITOR 1 PRECURSOR (HUMAN);                                                                                                                                                                                             |
| 6911                   | 16789                 | 26982             | 1.18                 | 3.8E+00                                       | D44725.1                 | EST_HUMAN                     | Helicobacter pylori, strain J99 section 123 of 132 of the complete genome                                                                                                                                                                    |
| 3336                   | 13845                 | 23622             | 10.09                | 3.7E+00                                       | AL161539.2               | NT                            | HUMSUPY135 Human brain cDNA Homo sapiens cDNA clone 148                                                                                                                                                                                      |
| 8730                   | 18586                 | 28872             | 2.13                 | 3.7E+00                                       | BF699279.1               | EST_HUMAN                     | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 39                                                                                                                                                                                |
| 8730                   | 18586                 | 28873             | 2.13                 | 3.7E+00                                       | BF699279.1               | EST_HUMAN                     | 602120551F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4277748 5'                                                                                                                                                                              |
| 578                    | 10516                 | 20322             | 2.1                  | 3.6E+00                                       | AV761055.1               | EST_HUMAN                     | 602120551F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4277748 5'                                                                                                                                                                              |
| 7022                   | 16899                 | 27090             | 3.66                 | 3.6E+00                                       | AE004447.1               | NT                            | AV761055 MDS Homo sapiens cDNA clone MDSBUE10 5'                                                                                                                                                                                             |
| 7022                   | 16899                 | 27091             | 3.66                 | 3.6E+00                                       | AE004447.1               | NT                            | Pseudomonas aeruginosa PA01, section 8 of 529 of the complete genome                                                                                                                                                                         |
| 7022                   | 16899                 | 27091             | 3.66                 | 3.6E+00                                       | AE004447.1               | NT                            | Pseudomonas aeruginosa PA01, section 8 of 529 of the complete genome                                                                                                                                                                         |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                       |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                       |                   |                      |                                               |                          |                               | Escherichia coli glycerophosphate dehydrogenase (glpD) gene, partial cds; and the translation start site has been verified (glpE), the translation start site has been verified (glpG), and repressor protein (glpR) genes, complete cds |
| 8228                   | 18110                 |                   | 3.76                 | 3.6E+00                                       | M96795.1                 | NT                            |                                                                                                                                                                                                                                          |
| 3209                   | 13133                 | 22934             | 1.04                 | 3.5E+00                                       | AF221538.1               | NT                            | Cryptosporidium felis heat shock protein 70 (HSP70) gene, partial cds                                                                                                                                                                    |
| 1496                   | 11400                 | 21260             | 3.57                 | 3.4E+00                                       | AF254577.1               | NT                            | Brassica napus RPB6d mRNA, complete cds                                                                                                                                                                                                  |
| 2532                   | 12406                 | 22298             | 1.02                 | 3.4E+00                                       | AL163278.2               | NT                            | Homo sapiens chromosome 21 segment HS21C078                                                                                                                                                                                              |
| 6354                   | 16217                 | 26378             | 2.41                 | 3.4E+00                                       | P04052                   | SWISSPROT                     | DNA-DIRECTED RNA POLYMERASE II LARGEST SUBUNIT                                                                                                                                                                                           |
| 7889                   | 17739                 | 27982             | 3.17                 | 3.4E+00                                       | AF013167.1               | NT                            | Saccharomyces cerevisiae MSS1 gene, complete cds                                                                                                                                                                                         |
| 8818                   | 18631                 | 28919             | 1.92                 | 3.4E+00                                       | L77570.1                 | NT                            | Homo sapiens DiGeorge syndrome critical region, centromeric end                                                                                                                                                                          |
| 5036                   | 14908                 | 24679             | 1.41                 | 3.3E+00                                       | 7662155                  | NT                            | Homo sapiens KIAA0480 gene product (KIAA0480), mRNA                                                                                                                                                                                      |
| 5036                   | 14908                 | 24680             | 1.41                 | 3.3E+00                                       | 7662155                  | NT                            | Homo sapiens KIAA0480 gene product (KIAA0480), mRNA                                                                                                                                                                                      |
| 492                    | 10435                 | 20248             | 1.39                 | 3.2E+00                                       | X99422.1                 | NT                            | D.reio zp-50 POU gene                                                                                                                                                                                                                    |
| 3938                   | 10435                 | 20248             | 0.79                 | 3.2E+00                                       | X99422.1                 | NT                            | D.reio zp-50 POU gene                                                                                                                                                                                                                    |
| 5439                   | 15359                 | 25415             | 2.66                 | 3.2E+00                                       | P12783                   | SWISSPROT                     | PHOSPHOGLYCERATE KINASE, CYTOSOLIC                                                                                                                                                                                                       |
| 5439                   | 15359                 | 25416             | 2.66                 | 3.2E+00                                       | P12783                   | SWISSPROT                     | PHOSPHOGLYCERATE KINASE, CYTOSOLIC                                                                                                                                                                                                       |
| 5808                   | 15713                 | 25825             | 2.06                 | 3.2E+00                                       | P18931                   | SWISSPROT                     | NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 4                                                                                                                                                                                                   |
| 5808                   | 15713                 | 25826             | 2.06                 | 3.2E+00                                       | P18931                   | SWISSPROT                     | NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 4                                                                                                                                                                                                   |
| 6569                   | 16427                 | 26609             | 2.35                 | 3.2E+00                                       | Y13655.1                 | NT                            | Chlamydomonas reinhardtii chloroplast DNA for rps9, ycf4, ycf3, rps18 genes                                                                                                                                                              |
| 6569                   | 16427                 | 26610             | 2.35                 | 3.2E+00                                       | Y13655.1                 | NT                            | Chlamydomonas reinhardtii chloroplast DNA for rps9, ycf4, ycf3, rps18 genes                                                                                                                                                              |
| 7221                   | 17098                 |                   | 6.33                 | 3.2E+00                                       | P13061                   | SWISSPROT                     | PERIPLASMIC [NIFE] HYDROGENASE SMALL SUBUNIT (NIFE HYDROGENLYASE SMALL CHAIN)                                                                                                                                                            |
| 7491                   | 17361                 | 27567             | 1.17                 | 3.2E+00                                       | M36383.1                 | NT                            | S.cerevisiae threonine deaminase (ILDV1) gene, complete cds                                                                                                                                                                              |
| 7837                   | 17687                 | 27932             | 1.69                 | 3.2E+00                                       | AB016081.2               | NT                            | Oryzias latipes OIGC6 gene for guanyM cyclase C, complete cds                                                                                                                                                                            |
| 9089                   | 18863                 |                   | 4.32                 | 3.2E+00                                       | L38836.1                 | NT                            | Sus scrofa choline acetyltransferase gene, promoter region                                                                                                                                                                               |
| 5582                   | 15497                 | 25574             | 2.42                 | 3.1E+00                                       | Q10135                   | SWISSPROT                     | HYPOTHETICAL 142.5 KD PROTEIN C23E2.02 IN CHROMOSOME 1                                                                                                                                                                                   |
| 7000                   | 16877                 | 27067             | 4.35                 | 3.1E+00                                       | P49894                   | SWISSPROT                     | TYPE I IODOTHYRONINE DEIODINASE (TYPE-15DEIODINASE) (DIOI) (TYPE 1 DI) (5DI)                                                                                                                                                             |
| 7000                   | 16877                 | 27068             | 4.35                 | 3.1E+00                                       | P49894                   | SWISSPROT                     | TYPE I IODOTHYRONINE DEIODINASE (TYPE-15DEIODINASE) (DIOI) (TYPE 1 DI) (5DI)                                                                                                                                                             |
|                        |                       |                   |                      |                                               |                          |                               | GLUTAMATE [NMDA] RECEPTOR SUBUNIT EPSILON 3 PRECURSOR (N-METHYL D-ASPARTATE RECEPTOR SUBTYPE 2C) (NR2C) (NMDAR2C)                                                                                                                        |
| 7334                   | 17238                 |                   | 3.8                  | 3.1E+00                                       | Q14957                   | SWISSPROT                     | DEOXYHYPUISINE SYNTHASE (DHS)                                                                                                                                                                                                            |
| 7920                   | 17770                 | 28009             | 4.78                 | 3.1E+00                                       | P49365                   | SWISSPROT                     | GENOME POLYPROTEIN [CONTAINS: CAPSID PROTEIN C (CORE PROTEIN); MATRIX PROTEIN (ENVELOPE PROTEIN M); MAJOR ENVELOPE PROTEIN E; NONSTRUCTURAL PROTEINS NS1, NS2A, NS2B, NS4A AND NS4B; HELICASE (NS3); RNA-DIRECTED RNA POLYMERASE (NS5)]  |
| 8759                   | 17908                 |                   | 3.78                 | 3.1E+00                                       | P33515                   | SWISSPROT                     | retinoic acid nuclear receptor isoform beta 2 [hnic, embryonal carcinoma cell line, PCC7-MZ1, mRNA, 2971 nt]                                                                                                                             |
| 8774                   | 18591                 |                   | 3.35                 | 3.1E+00                                       | S56660.1                 | NT                            |                                                                                                                                                                                                                                          |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                        |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2807                   | 12737                 | 22535             | 1.06                 | 3.0E+00                                       | 8923984                  | NT                            | Homo sapiens hypothetical protein PRO0899 (PRO0899), mRNA                                                                                                                 |
| 5273                   | 15195                 | 24970             | 1.63                 | 3.0E+00                                       | X53096.1                 | NT                            | S.aureus genes encoding Sau961 DNA methyltransferase and Sau961 restriction endonuclease                                                                                  |
| 6245                   | 16111                 |                   | 9.5                  | 3.0E+00                                       | P18406                   | SWISSPROT                     | CYR61 PROTEIN PRECURSOR (3CH61)                                                                                                                                           |
| 7164                   | 17041                 |                   | 1.45                 | 3.0E+00                                       | X67838.1                 | NT                            | B.napus DNA for myrosinase                                                                                                                                                |
|                        |                       |                   |                      |                                               |                          |                               | RETINAL GUANYLYL CYCLASE 2 PRECURSOR (GUANYLYL CYCLASE 2F, RETINAL) (RETGC-2)<br>(ROD OUTER SEGMENT MEMBRANE GUANYLYL CYCLASE 2) (ROS-GC2) (GUANYLYL CYCLASE<br>F) (GC-F) |
| 8374                   | 18251                 | 28501             | 6.51                 | 3.0E+00                                       | P51842                   | SWISSPROT                     | RETINAL GUANYLYL CYCLASE 2 PRECURSOR (GUANYLYL CYCLASE 2F, RETINAL) (RETGC-2)<br>(ROD OUTER SEGMENT MEMBRANE GUANYLYL CYCLASE 2) (ROS-GC2) (GUANYLYL CYCLASE<br>F) (GC-F) |
| 8374                   | 18251                 | 28502             | 6.51                 | 3.0E+00                                       | P51842                   | SWISSPROT                     | RETINAL GUANYLYL CYCLASE 2 PRECURSOR (GUANYLYL CYCLASE 2F, RETINAL) (RETGC-2)<br>(ROD OUTER SEGMENT MEMBRANE GUANYLYL CYCLASE 2) (ROS-GC2) (GUANYLYL CYCLASE<br>F) (GC-F) |
| 1964                   | 11858                 | 21747             | 2.56                 | 2.9E+00                                       | AE002225.2               | NT                            | Chlamydomonas reinhardtii AR39, section 53 of 94 of the complete genome                                                                                                   |
| 6129                   | 15976                 | 26112             | 1.63                 | 2.9E+00                                       | Z36879.1                 | NT                            | F.pirngelii gdcSP, gene for P-protein of the glycine cleavage system                                                                                                      |
| 6282                   | 16146                 | 26300             | 4.47                 | 2.9E+00                                       | O14514                   | SWISSPROT                     | BRAIN-SPECIFIC ANGIOGENESIS INHIBITOR 1 PRECURSOR                                                                                                                         |
| 6282                   | 16146                 | 26301             | 4.47                 | 2.9E+00                                       | O14514                   | SWISSPROT                     | BRAIN-SPECIFIC ANGIOGENESIS INHIBITOR 1 PRECURSOR                                                                                                                         |
| 6410                   | 16271                 | 26433             | 5.19                 | 2.9E+00                                       | P46589                   | SWISSPROT                     | ADHERENCE FACTOR (ADHESION AND AGGREGATION MEDIATING SURFACE ANTIGEN)                                                                                                     |
| 1441                   | 11346                 | 21212             | 5.79                 | 2.8E+00                                       | AF186398.1               | NT                            | Buxus harlandii maturase K (matK) gene, partial cds; chloroplast gene for chloroplast product                                                                             |
| 1615                   | 11519                 |                   | 3.12                 | 2.8E+00                                       | AL161552.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 52                                                                                                             |
| 6325                   | 16188                 | 26350             | 4.78                 | 2.8E+00                                       | 8393724                  | NT                            | Mus musculus endomucin (LOC53423), mRNA                                                                                                                                   |
| 230                    | 10199                 | 20012             | 4.63                 | 2.7E+00                                       | 6679306                  | NT                            | Mus musculus per-hexamer repeat gene 3 (Phxr3), mRNA                                                                                                                      |
| 230                    | 10199                 | 20013             | 4.63                 | 2.7E+00                                       | 6679306                  | NT                            | Mus musculus per-hexamer repeat gene 3 (Phxr3), mRNA                                                                                                                      |
| 5408                   | 15327                 | 25377             | 1.75                 | 2.7E+00                                       | L14005.1                 | NT                            | Homo sapiens apoA polymorphism Kringle IV gene, exons 1 and 2                                                                                                             |
| 7185                   | 17062                 |                   | 2.21                 | 2.7E+00                                       | AL116459.1               | NT                            | Botrytis cinerea strain T4 cDNA library under conditions of nitrogen deprivation                                                                                          |
| 7996                   | 17846                 |                   | 2.16                 | 2.7E+00                                       | BE063527.1               | EST_HUMAN                     | CM0-BT0281-031199-087-h04 BT0281 Homo sapiens cDNA                                                                                                                        |
| 4576                   | 14467                 | 24253             | 4.35                 | 2.6E+00                                       | AF068749.1               | NT                            | Mus musculus sphingosine kinase (SPHK1b) mRNA, complete cds                                                                                                               |
| 5405                   | 15324                 | 25373             | 1.97                 | 2.6E+00                                       | 6755801                  | NT                            | Mus musculus SRY-box containing gene 13 (Sox13), mRNA                                                                                                                     |
| 5405                   | 15324                 | 25374             | 1.97                 | 2.6E+00                                       | 6755801                  | NT                            | Mus musculus SRY-box containing gene 13 (Sox13), mRNA                                                                                                                     |
|                        |                       |                   |                      |                                               |                          |                               | Mus musculus SH2-containing inositol 5-phosphatase (Ship) gene, exons 16 through 27, and complete cds                                                                     |
| 6533                   | 16391                 |                   | 5.42                 | 2.6E+00                                       | AF235502.1               | NT                            | fabA bean necrotic yellows virus C2-Eg gene, isolate Egyptian EV1-93                                                                                                      |
| 6896                   | 16576                 | 26767             | 1.2                  | 2.6E+00                                       | AJ132180.1               | NT                            | fabA bean necrotic yellows virus C2-Eg gene, isolate Egyptian EV1-93                                                                                                      |
| 6896                   | 16576                 | 26768             | 1.2                  | 2.6E+00                                       | AJ132180.1               | NT                            | fabA bean necrotic yellows virus C2-Eg gene, isolate Egyptian EV1-93                                                                                                      |
| 7567                   | 17418                 | 27634             | 2.95                 | 2.6E+00                                       | AL161540.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 40                                                                                                             |
| 7927                   | 17777                 |                   | 1.52                 | 2.6E+00                                       | 9055193                  | NT                            | Mus musculus cleavage and polyadenylation specificity factor 3 (Cpsf3), mRNA                                                                                              |
| 9711                   | 19649                 |                   | 2.31                 | 2.6E+00                                       | 11419220                 | NT                            | Homo sapiens ATP-binding cassette, sub-family B (MDR/TAP), member 4 (ABCB4), mRNA                                                                                         |
| 1448                   | 11353                 | 21216             | 2.08                 | 2.5E+00                                       | AJ271844.1               | NT                            | Aspergillus nidulans recQ gene for DNA helicase, exons 1-4                                                                                                                |



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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-----------------------------------------------------------------------------------------------|
| 1448                   | 11353                 | 21217             | 2.08                 | 2.5E+00                                       | AJ271844.1               | NT                            | Aspergillus nidulans recQ gene for DNA helicase, exons 1-4                                    |
| 5552                   | 15468                 | 25537             | 2.33                 | 2.5E+00                                       | P13485                   | SWISSPROT                     | TEICHOIC ACID BIOSYNTHESIS PROTEIN F                                                          |
| 5552                   | 15468                 | 25538             | 2.33                 | 2.5E+00                                       | P13485                   | SWISSPROT                     | TEICHOIC ACID BIOSYNTHESIS PROTEIN F                                                          |
| 5886                   | 15468                 | 25537             | 1.71                 | 2.5E+00                                       | P13485                   | SWISSPROT                     | TEICHOIC ACID BIOSYNTHESIS PROTEIN F                                                          |
| 5886                   | 15468                 | 25538             | 1.71                 | 2.5E+00                                       | P13485                   | SWISSPROT                     | TEICHOIC ACID BIOSYNTHESIS PROTEIN F                                                          |
| 6561                   | 16419                 | 26598             | 1.34                 | 2.5E+00                                       | AW949158.1               | EST_HUMAN                     | QV4-FT0005-110500-205-g07 F0005 Homo sapiens cDNA                                             |
| 7264                   | 17141                 | 27334             | 1.75                 | 2.5E+00                                       | D50307.1                 | NT                            | Rice DNA for aldolase C-1, complete cds                                                       |
| 9086                   | 18861                 |                   | 2.26                 | 2.5E+00                                       | AF289665.1               | NT                            | Mus musculus EIF4H gene, partial cds; LIMK1 gene, complete cds; and ELN gene, partial cds     |
| 2980                   | 12907                 | 22707             | 0.96                 | 2.4E+00                                       | M24282.1                 | NT                            | Chicken alpha-3 collagen type VI mRNA, 3' end                                                 |
| 4816                   | 14699                 | 24485             | 7.62                 | 2.4E+00                                       | 4503352                  | NT                            | Homo sapiens double C2-like domains, alpha (DOC2A) mRNA                                       |
| 5657                   | 15569                 | 25664             | 4.19                 | 2.4E+00                                       | P02843                   | SWISSPROT                     | VITELLOGENIN I PRECURSOR (YOLK PROTEIN 1)                                                     |
| 6733                   | 16613                 | 26802             | 2.14                 | 2.4E+00                                       | P26842                   | SWISSPROT                     | CD27L RECEPTOR PRECURSOR (T-CELL ACTIVATION ANTIGEN CD27) (T14)                               |
| 6733                   | 16613                 | 26803             | 2.14                 | 2.4E+00                                       | P26842                   | SWISSPROT                     | CD27L RECEPTOR PRECURSOR (T-CELL ACTIVATION ANTIGEN CD27) (T14)                               |
| 6780                   | 16659                 |                   | 2.63                 | 2.4E+00                                       | AE001466.1               | NT                            | Helicobacter pylori, strain J99 section 47 of 132 of the complete genome                      |
| 7026                   | 16903                 |                   | 1.71                 | 2.4E+00                                       | AW875126.1               | EST_HUMAN                     | RC2-PT0004-031299-011-d05 PT0004 Homo sapiens cDNA                                            |
| 7125                   | 17002                 | 27194             | 9.45                 | 2.4E+00                                       | P24091                   | SWISSPROT                     | ENDOCHITINASE B PRECURSOR (CHN-B)                                                             |
| 7771                   | 17621                 | 27853             | 2.5                  | 2.4E+00                                       | P13673                   | SWISSPROT                     | SKIN GRANULE PROTEIN PRECURSOR                                                                |
| 7771                   | 17621                 | 27854             | 2.5                  | 2.4E+00                                       | P13673                   | SWISSPROT                     | SKIN GRANULE PROTEIN PRECURSOR                                                                |
| 7820                   | 17670                 | 27911             | 2.18                 | 2.4E+00                                       | X92511.1                 | NT                            | H.sapiens CTGF gene and promoter region                                                       |
| 7881                   | 17731                 |                   | 6.49                 | 2.4E+00                                       | P09099                   | SWISSPROT                     | XYLULOSE KINASE (XYLUKINASE)                                                                  |
| 7914                   | 17764                 | 28002             | 1.67                 | 2.4E+00                                       | BE326702.1               | EST_HUMAN                     | hr63f06.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3133187 3'                            |
| 7914                   | 17764                 | 28003             | 1.67                 | 2.4E+00                                       | BE326702.1               | EST_HUMAN                     | hr63f06.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3133187 3'                            |
| 8428                   | 18302                 | 28558             | 1.77                 | 2.4E+00                                       | Y14079.1                 | NT                            | Bacillus subtilis chromosomal DNA, region 75 degrees: glpP'FKD operon and downstream          |
| 8665                   | 18554                 | 28839             | 2.52                 | 2.4E+00                                       | AF158652.2               | NT                            | Fragaria x ananassa cytosolic ascorbate peroxidase (ApxSC) gene, ApxSC-c allele, complete cds |
| 1233                   | 11140                 | 20992             | 9.36                 | 2.3E+00                                       | Z46724.1                 | NT                            | G. domesticus artificial single chain antibody gene (L3)                                      |
| 4031                   | 13934                 |                   | 1.28                 | 2.3E+00                                       | AJ401081.1               | NT                            | Bos taurus partial cytb gene for cytochrome b                                                 |
| 6408                   | 16269                 | 26431             | 2.22                 | 2.3E+00                                       | 6978554                  | NT                            | Rattus norvegicus ATPase, Ca++ transporting, ubiquitous (Atp2a3), mRNA                        |
| 6479                   | 19766                 |                   | 2.3                  | 2.3E+00                                       | P07199                   | SWISSPROT                     | MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B)                                |
| 6573                   | 16431                 | 26613             | 1.53                 | 2.3E+00                                       | X60265.1                 | NT                            | M.mazei dnaK and dnaJ genes homologues coding for DnaK and DnaJ                               |
| 7289                   | 17166                 | 27364             | 1.81                 | 2.3E+00                                       | Q11127                   | SWISSPROT                     | ALPHA-(1,3)-FUCOSYLTRANSFERASE (GALACTOSIDE 3-L-FUCOSYLTRANSFERASE)                           |
| 8968                   | 18793                 | 29063             | 2.6                  | 2.3E+00                                       | BF541987.1               | EST_HUMAN                     | 602069121F1 NIH_MGC 58 Homo sapiens cDNA clone IMAGE:4068173 5'                               |
| 8968                   | 18793                 | 29084             | 2.6                  | 2.3E+00                                       | BF541987.1               | EST_HUMAN                     | 602069121F1 NIH_MGC 58 Homo sapiens cDNA clone IMAGE:4068173 5'                               |

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|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9304                   | 19002                 | 25333             | 4                    | 2.3E+00                                       | BE95237.1                | EST_HUMAN                     | 601433673F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918643 5'                                                                                                                                                                                               |
| 9936                   | 19405                 |                   | 1.37                 | 2.3E+00                                       | AF281862.1               | NT                            | Neurospora crassa G protein alpha subunit GNA-3 (gna-3) gene, complete cds                                                                                                                                                                                    |
| 4216                   | 14114                 | 23891             | 3.82                 | 2.2E+00                                       | D67071.1                 | NT                            | Rat gene for regucalcin, exon1 (non-coding exon)                                                                                                                                                                                                              |
| 4216                   | 14114                 | 23892             | 3.82                 | 2.2E+00                                       | D67071.1                 | NT                            | Rat gene for regucalcin, exon1 (non-coding exon)                                                                                                                                                                                                              |
|                        |                       |                   |                      |                                               |                          |                               | SORTILIN-RELATED RECEPTOR PRECURSOR (SORTING PROTEIN-RELATED RECEPTOR CONTAINING LDLR CLASS A REPEATS) (MSORLA-1) (SORLA-1) (LOW-DENSITY LIPOPROTEIN RECEPTOR RELATIVE WITH 11 LIGAND-BINDING REPEATS) (LDLR RELATIVE WITH 11 LIGAND-BINDING REPEATS) (LR11)> |
| 5276                   | 15198                 | 24973             | 10.08                | 2.2E+00                                       | O88307                   | SWISSPROT                     | SORTILIN-RELATED RECEPTOR PRECURSOR (SORTING PROTEIN-RELATED RECEPTOR CONTAINING LDLR CLASS A REPEATS) (MSORLA-1) (SORLA-1) (LOW-DENSITY LIPOPROTEIN RECEPTOR RELATIVE WITH 11 LIGAND-BINDING REPEATS) (LDLR RELATIVE WITH 11 LIGAND-BINDING REPEATS) (LR11)> |
| 5276                   | 15198                 | 24974             | 10.08                | 2.2E+00                                       | O88307                   | SWISSPROT                     | SORTILIN-RELATED RECEPTOR PRECURSOR (SORTING PROTEIN-RELATED RECEPTOR CONTAINING LDLR CLASS A REPEATS) (MSORLA-1) (SORLA-1) (LOW-DENSITY LIPOPROTEIN RECEPTOR RELATIVE WITH 11 LIGAND-BINDING REPEATS) (LDLR RELATIVE WITH 11 LIGAND-BINDING REPEATS) (LR11)> |
| 5696                   | 15605                 | 25707             | 9.06                 | 2.2E+00                                       | BE250383.1               | EST_HUMAN                     | 600943401T1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2859777 3'                                                                                                                                                                                               |
| 5835                   | 15741                 | 25853             | 3.3                  | 2.2E+00                                       | Q00335                   | SWISSPROT                     | MINOR VIRION STRUCTURAL PROTEIN MU-2                                                                                                                                                                                                                          |
| 5978                   | 15882                 | 26005             | 2.89                 | 2.2E+00                                       | P51459                   | SWISSPROT                     | INSULIN-LIKE GROWTH FACTOR II PRECURSOR (IGF-II) (SOMATOMEDIN A)                                                                                                                                                                                              |
| 6155                   | 15113                 |                   | 3.14                 | 2.2E+00                                       | AA594574.1               | EST_HUMAN                     | n195b02.s1 NCI_CGAP_Co10 Homo sapiens cDNA clone IMAGE:1058379 3'                                                                                                                                                                                             |
| 6486                   | 16344                 | 26514             | 51.56                | 2.2E+00                                       | AA449012.1               | EST_HUMAN                     | z005g10.r1 Soares_tetol_tetus_Nb2Hf8_9w Homo sapiens cDNA clone IMAGE:785634 5'                                                                                                                                                                               |
| 7381                   | 17250                 |                   | 11.83                | 2.2E+00                                       | BE741678.1               | EST_HUMAN                     | 601594733F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3948561 5'                                                                                                                                                                                                |
| 7518                   | 19468                 |                   | 2.1                  | 2.2E+00                                       | Q04706                   | SWISSPROT                     | TRANSPONSON TY1 PROTEIN A                                                                                                                                                                                                                                     |
|                        |                       |                   |                      |                                               |                          |                               | qm69b03.x1 Soares_placenta_8tc6weeks_2NbhP8tc6w Homo sapiens cDNA clone IMAGE:1893965 3'                                                                                                                                                                      |
| 7783                   | 17633                 | 27865             | 1.56                 | 2.2E+00                                       | A1290373.1               | EST_HUMAN                     | similar to gb:Y00433 GLUTATHIONE PEROXIDASE (HUMAN);                                                                                                                                                                                                          |
| 7783                   | 17633                 | 27866             | 1.56                 | 2.2E+00                                       | A1290373.1               | EST_HUMAN                     | qm69b03.x1 Soares_placenta_8tc6weeks_2NbhP8tc6w Homo sapiens cDNA clone IMAGE:1893965 3'                                                                                                                                                                      |
| 7812                   | 17662                 | 27902             | 2.28                 | 2.2E+00                                       | BF246782.1               | EST_HUMAN                     | similar to gb:Y00433 GLUTATHIONE PEROXIDASE (HUMAN);                                                                                                                                                                                                          |
| 7975                   | 17825                 | 28066             | 2.88                 | 2.2E+00                                       | AF183416.1               | NT                            | 601855591F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4075301 5'                                                                                                                                                                                               |
| 8739                   | 17888                 | 28132             | 4.5                  | 2.2E+00                                       | P07911                   | SWISSPROT                     | Homo sapiens ovarian granulosa cell 13.0 kDa protein hGR74 homolog mRNA, complete cds                                                                                                                                                                         |
| 8889                   | 18700                 | 28995             | 4.67                 | 2.2E+00                                       | P10407                   | SWISSPROT                     | UROMODULIN PRECURSOR (TAMM-HORSFALL URINARY GLYCOPROTEIN) (THP)                                                                                                                                                                                               |
| 557                    | 12670                 | 20304             | 6.81                 | 2.1E+00                                       | AF132612.2               | NT                            | EARLY E1A 28 KD PROTEIN                                                                                                                                                                                                                                       |
| 3539                   | 13455                 |                   | 1.19                 | 2.1E+00                                       | AW449386.1               | EST_HUMAN                     | Mus musculus pre-T cell receptor alpha gene, enhancer region and upstream region                                                                                                                                                                              |
| 6074                   | 16057                 | 26206             | 3.72                 | 2.1E+00                                       | O70159                   | SWISSPROT                     | U1-H-B13-akt-e-08-0-UI.s1 NCI_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2734550 3'                                                                                                                                                                              |
|                        |                       |                   |                      |                                               |                          |                               | ALPHA-2-HS-GLYCOPROTEIN PRECURSOR (FETUIN-A)                                                                                                                                                                                                                  |
| 6195                   | 15955                 | 26087             | 4.7                  | 2.1E+00                                       | N29575.1                 | EST_HUMAN                     | y00a10.s1 Soares_melanocyte_2NbhM Homo sapiens cDNA clone IMAGE:270618 3' similar to gb:M55654                                                                                                                                                                |
| 6948                   | 16826                 |                   | 1.99                 | 2.1E+00                                       | AU123630.1               | EST_HUMAN                     | TRANSCRIPTION INITIATION FACTOR TFIIID (HUMAN);                                                                                                                                                                                                               |
| 1178                   | 11089                 | 20934             | 1.23                 | 2.0E+00                                       | AF180327.1               | NT                            | AU123630 NT2RM2 Homo sapiens cDNA clone NT2RM2000671 5'                                                                                                                                                                                                       |
|                        |                       |                   |                      |                                               |                          |                               | Homo sapiens p22Dokdel (DOKDEL) mRNA, complete cds                                                                                                                                                                                                            |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit<br>Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|-----------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1178                   | 11089                 | 20935             | 1.23                 | 2.0E+00                                       | AF180527.1                  | NT                            | Homo sapiens p22Dokdel (DOKDEL) mRNA, complete cds                                                                                                |
| 1313                   | 11219                 | 21076             | 1.43                 | 2.0E+00                                       | AF204927.1                  | NT                            | Oryctolagus cuniculus Nat.k+-ATPase beta 1 subunit mRNA, complete cds                                                                             |
| 1557                   | 11462                 |                   | 3.13                 | 2.0E+00                                       | P25582                      | SWISSPROT                     | PUTATIVE RRNA METHYLTRANSFERASE SPB1                                                                                                              |
| 2102                   | 11991                 | 21890             | 4.6                  | 2.0E+00                                       | Z78279.1                    | NT                            | R.norvegicus mRNA for collagen alpha1 type I                                                                                                      |
| 2102                   | 11991                 | 21891             | 4.6                  | 2.0E+00                                       | Z78279.1                    | NT                            | R.norvegicus mRNA for collagen alpha1 type I                                                                                                      |
| 4011                   | 13917                 | 23692             | 2.09                 | 2.0E+00                                       | AW664496.1                  | EST_HUMAN                     | h113c05.x1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2972168 3' similar to gb:X01677<br>GLYCERALDEHYDE 3-PHOSPHATE DEHYDROGENASE, LIVER (HUMAN); |
| 4011                   | 13917                 | 23693             | 2.09                 | 2.0E+00                                       | AW664496.1                  | EST_HUMAN                     | h113c05.x1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2972168 3' similar to gb:X01677<br>GLYCERALDEHYDE 3-PHOSPHATE DEHYDROGENASE, LIVER (HUMAN); |
| 6678                   | 16558                 | 26761             | 3.8                  | 2.0E+00                                       | AB008676.1                  | NT                            | Escherichia coli 0157 DNA, map position at 46 min., complete cds                                                                                  |
| 6678                   | 16558                 | 26752             | 3.8                  | 2.0E+00                                       | AB008676.1                  | NT                            | Escherichia coli 0157 DNA, map position at 46 min., complete cds                                                                                  |
| 6678                   | 16558                 | 26763             | 3.8                  | 2.0E+00                                       | AB008676.1                  | NT                            | Escherichia coli 0157 DNA, map position at 46 min., complete cds                                                                                  |
| 7170                   | 17047                 | 27237             | 3.3                  | 2.0E+00                                       | F31500.1                    | EST_HUMAN                     | HSPD22703 HM3 Homo sapiens cDNA clone s4000117B08                                                                                                 |
| 9629                   | 19613                 | 24998             | 5.91                 | 2.0E+00                                       | 5834843                     | NT                            | Gallus gallus mitochondrion, complete genome                                                                                                      |
| 5437                   | 15357                 | 25412             | 4.67                 | 1.9E+00                                       | 6754389                     | NT                            | Mus musculus inositol 1,4,5-triphosphate receptor 1 (ltp1), mRNA                                                                                  |
| 5437                   | 15357                 | 25413             | 4.67                 | 1.9E+00                                       | 6754389                     | NT                            | Mus musculus inositol 1,4,5-triphosphate receptor 1 (ltp1), mRNA                                                                                  |
| 6047                   | 15950                 |                   | 2.27                 | 1.9E+00                                       | Q63627                      | SWISSPROT                     | CTD-BINDING SR-LIKE PROTEIN RA4                                                                                                                   |
| 6927                   | 16805                 | 26999             | 2.58                 | 1.9E+00                                       | P02467                      | SWISSPROT                     | COLLAGEN ALPHA 2(I) CHAIN PRECURSOR                                                                                                               |
| 6927                   | 16805                 | 27000             | 2.58                 | 1.9E+00                                       | P02467                      | SWISSPROT                     | COLLAGEN ALPHA 2(I) CHAIN PRECURSOR                                                                                                               |
| 7032                   | 16909                 |                   | 3.36                 | 1.9E+00                                       | BF360206.1                  | EST_HUMAN                     | CM3-MT0114-010900-323-h12 MT0114 Homo sapiens cDNA                                                                                                |
| 7156                   | 17033                 |                   | 1.86                 | 1.9E+00                                       | O51781                      | SWISSPROT                     | ARGININE DEIMINASE (ADI) (ARGININE DIHYDROLASE) (AD)                                                                                              |
| 3054                   | 12981                 | 22773             | 1.71                 | 1.8E+00                                       | P21004                      | SWISSPROT                     | PROTEIN B8 PRECURSOR                                                                                                                              |
| 3082                   | 13009                 | 22799             | 4.48                 | 1.8E+00                                       | U04356.1                    | NT                            | Synechococcus sp. PCC7942 copper transporting P-ATPase (ctaA) and ATP synthase epsilon subunit (atpE) genes, complete cds                         |
| 3082                   | 13009                 | 22800             | 4.48                 | 1.8E+00                                       | U04356.1                    | NT                            | Synechococcus sp. PCC7942 copper transporting P-ATPase (ctaA) and ATP synthase epsilon subunit (atpE) genes, complete cds                         |
| 5577                   | 15492                 |                   | 2.22                 | 1.8E+00                                       | P18502                      | SWISSPROT                     | HEDGEHOG RECEPTOR (PATCHED PROTEIN)                                                                                                               |
| 5712                   | 15620                 | 25723             | 1.9                  | 1.8E+00                                       | BF311999.1                  | EST_HUMAN                     | 601897854F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4127364 5'                                                                                   |
| 6043                   | 15946                 | 26078             | 1.3                  | 1.8E+00                                       | BF305652.1                  | EST_HUMAN                     | 601893489F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4139038 5'                                                                                   |
| 7140                   | 17017                 | 27210             | 2.09                 | 1.8E+00                                       | O43281                      | SWISSPROT                     | EMBRYONAL FYN-ASSOCIATED SUBSTRATE (HEFS)                                                                                                         |
| 7293                   | 17169                 | 27369             | 1.21                 | 1.8E+00                                       | R31042.1                    | EST_HUMAN                     | yh72c08.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:135278 5'                                                                          |
| 7899                   | 17749                 |                   | 3.29                 | 1.8E+00                                       | AF111849.1                  | NT                            | Homo sapiens PRO0530 mRNA, complete cds                                                                                                           |
| 8998                   | 18801                 |                   | 3.76                 | 1.8E+00                                       | P36062                      | SWISSPROT                     | HYPOTHETICAL 75.5 KD PROTEIN IN SDH1-CIM5YTA3 INTERGENIC REGION                                                                                   |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                      |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 9428                   | 19584                 |                   | 4.01                 | 1.8E+00                                       | AF314254.1               | NT                            | Chlamydomonas reinhardtii alternative oxidase 1 (AOX1) gene, nuclear gene encoding mitochondrial protein                |
| 9504                   | 19119                 |                   | 2.4                  | 1.8E+00                                       | 9506404                  | NT                            | Rattus norvegicus Actin-related protein complex 1b (Arpct1b), mRNA                                                      |
| 9968                   | 19429                 |                   | 1.34                 | 1.8E+00                                       | BF316805.1               | EST_HUMAN                     | 601903309F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4135586 5'                                                         |
| 1092                   | 11008                 | 20849             | 1.92                 | 1.7E+00                                       | Q60114                   | SWISSPROT                     | LEVANSUCRASE (BETA-D-FRUCTOFURANOSYL TRANSFERASE) (SUCROSE 6-FRUCTOSYL TRANSFERASE)                                     |
| 2225                   | 12110                 | 22013             | 3.25                 | 1.7E+00                                       | AL163280.2               | NT                            | Homo sapiens chromosome 21 segment HS21C080                                                                             |
| 2321                   | 12202                 | 22101             | 1.02                 | 1.7E+00                                       | AI141067.1               | EST_HUMAN                     | oz43h05.x1 Soares NIHMPu_S1 Homo sapiens cDNA clone IMAGE:1678137 3'                                                    |
| 4356                   | 14252                 | 24037             | 0.84                 | 1.7E+00                                       | Q60114                   | SWISSPROT                     | LEVANSUCRASE (BETA-D-FRUCTOFURANOSYL TRANSFERASE) (SUCROSE 6-FRUCTOSYL TRANSFERASE)                                     |
| 5448                   | 15369                 | 25424             | 1.48                 | 1.7E+00                                       | BE063546.1               | EST_HUMAN                     | CMO-BT0282-171299-127-e05 BT0282 Homo sapiens cDNA                                                                      |
| 5448                   | 15369                 | 25425             | 1.48                 | 1.7E+00                                       | BE063546.1               | EST_HUMAN                     | CMO-BT0282-171299-127-e05 BT0282 Homo sapiens cDNA                                                                      |
| 5664                   | 15575                 | 25673             | 3.58                 | 1.7E+00                                       | Q9TTR8                   | SWISSPROT                     | COUP TRANSCRIPTION FACTOR 1 (COUP-TF1) (COUP-TF1)                                                                       |
| 7014                   | 16891                 |                   | 1.29                 | 1.7E+00                                       | BF308000.1               | EST_HUMAN                     | 601894255F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4140084 5'                                                         |
| 7282                   | 19467                 | 27355             | 2.15                 | 1.7E+00                                       | Q60479                   | SWISSPROT                     | HOMEOBOX PROTEIN DLX-3                                                                                                  |
| 7282                   | 19467                 | 27356             | 2.15                 | 1.7E+00                                       | Q60479                   | SWISSPROT                     | HOMEOBOX PROTEIN DLX-3                                                                                                  |
| 8874                   | 18686                 | 28977             | 1.78                 | 1.7E+00                                       | W22424.1                 | EST_HUMAN                     | 67B7 Human retina cDNA Tsp509I-cleaved sublibrary Homo sapiens cDNA not directional                                     |
| 9384                   | 19044                 | 25306             | 1.37                 | 1.7E+00                                       | AI678443.1               | EST_HUMAN                     | tu82407.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2257549 3' similar to contains MSR1.t1                           |
| 9860                   | 19351                 | 25185             | 2.26                 | 1.7E+00                                       | AI198573.1               | EST_HUMAN                     | MSR1 repetitive element ;                                                                                               |
| 1989                   | 11882                 | 21775             | 16.73                | 1.6E+00                                       | AF199339.1               | NT                            | qf50b01.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1753417 3' similar to contains L1.t1 L1 repetitive element ; |
| 1997                   | 11891                 | 21783             | 3.61                 | 1.6E+00                                       | AF077374.1               | NT                            | Homo sapiens lens epithelium-derived growth factor gene, alternatively spliced, complete cds                            |
| 2003                   | 11896                 | 21788             | 1.96                 | 1.6E+00                                       | Y11344.1                 | NT                            | Homo sapiens small proline-rich protein (SPRR3) gene, exons 1, 2, and 3 and complete cds                                |
| 2238                   | 12122                 |                   | 1.48                 | 1.6E+00                                       | X98373.1                 | NT                            | Mus musculus ST6GalNAcIII gene, exon 2                                                                                  |
|                        |                       |                   | 1.48                 | 1.6E+00                                       | X98373.1                 | NT                            | B.napus gene encoding endo-polygalacturonase                                                                            |
| 2831                   | 12858                 | 22658             | 2.52                 | 1.6E+00                                       | W59426.1                 | EST_HUMAN                     | zd25f01.r1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:341689 5' similar to                                |
| 3946                   | 13854                 |                   | 5.14                 | 1.6E+00                                       | BF570077.1               | EST_HUMAN                     | gbD29805 N-ACETYL LACTOSAMINE SYNTHASE (HUMAN);                                                                         |
| 4255                   | 14154                 | 23928             | 1.44                 | 1.6E+00                                       | AF155827.1               | NT                            | 602186095T1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4310591 3'                                                         |
| 4255                   | 14154                 | 23929             | 1.44                 | 1.6E+00                                       | AF155827.1               | NT                            | Homo sapiens proliferation-associated SNF2-like protein (SMARCA6) mRNA, complete cds                                    |
| 5016                   | 14890                 | 24657             | 3.14                 | 1.6E+00                                       | Y11344.1                 | NT                            | Homo sapiens proliferation-associated SNF2-like protein (SMARCA6) mRNA, complete cds                                    |
| 5016                   | 14890                 | 24658             | 3.14                 | 1.6E+00                                       | Y11344.1                 | NT                            | Mus musculus ST6GalNAcIII gene, exon 2                                                                                  |
| 5558                   | 15474                 | 25546             | 2.19                 | 1.6E+00                                       | L04908.1                 | NT                            | Mus musculus ST6GalNAcIII gene, exon 2                                                                                  |
| 6296                   | 16160                 | 26317             | 2.64                 | 1.6E+00                                       | BE697267.1               | EST_HUMAN                     | Brachydanio rerio MHC class II DA-beta-2*01 gene, 3' end                                                                |
|                        |                       |                   |                      |                                               |                          |                               | RCO-CT0415-200700-032-c10 CT0415 Homo sapiens cDNA                                                                      |

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Table 4

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-----------------------------------------------------------------------------------------------|
| 6681                   | 16661                 |                   | 1.21                 | 1.6E+00                                       | Q46378                   | SWISSPROT                     | VIRULENCE FACTOR MVIN HOMOLOG                                                                 |
| 6881                   | 16760                 | 26988             | 3.56                 | 1.6E+00                                       | AJ297131.1               | NT                            | Mus musculus SIL, MAP_17, CYP_a, SCL & CYP_b genes                                            |
| 7444                   | 19465                 | 26646             | 1.3                  | 1.6E+00                                       | X52046.1                 | NT                            | M.musculus COL3A1 gene for collagen alpha-1                                                   |
| 7444                   | 19465                 | 26647             | 1.3                  | 1.6E+00                                       | X52046.1                 | NT                            | M.musculus COL3A1 gene for collagen alpha-1                                                   |
| 7611                   | 17462                 | 27679             | 1.29                 | 1.6E+00                                       | T41290.1                 | EST_HUMAN                     | ph6b6_19/1TV Outward Alu-primed lncDNA library Homo sapiens cDNA clone ph6b6_19/1TV           |
| 7852                   | 17702                 | 27946             | 1.25                 | 1.6E+00                                       | AW835644.1               | EST_HUMAN                     | QV4-L T0016-090200-100-d07 L T0016 Homo sapiens cDNA                                          |
| 7852                   | 17702                 | 27947             | 1.25                 | 1.6E+00                                       | AW835644.1               | EST_HUMAN                     | QV4-L T0016-090200-100-d07 L T0016 Homo sapiens cDNA                                          |
| 8217                   | 15520                 | 25601             | 5.86                 | 1.6E+00                                       | AF005631.1               | NT                            | Homo sapiens transglutaminase type I (Tgasel) gene, promoter region                           |
| 8944                   | 18752                 | 29047             | 3.25                 | 1.6E+00                                       | AF104313.1               | NT                            | Homo sapiens unknown mRNA                                                                     |
| 9902                   | 19379                 |                   | 1.65                 | 1.6E+00                                       | AV764043.1               | EST_HUMAN                     | AV764043 MDS Homo sapiens cDNA clone MDSDAH08 5'                                              |
| 30                     | 10017                 | 19812             | 4.29                 | 1.5E+00                                       | U53449.1                 | NT                            | Rattus norvegicus jun dimerization protein 2 (jdp-2) mRNA, complete cds                       |
| 231                    | 10200                 | 20014             | 1.76                 | 1.5E+00                                       | AE002201.2               | NT                            | Chlamydia pneumoniae AR39, section 32 of 94 of the complete genome                            |
| 605                    | 10541                 |                   | 1.79                 | 1.5E+00                                       | 6752961                  | NT                            | Mus musculus a disintegrin and metalloproteinase domain (ADAM) 15 (metargidin) (Adam15), mRNA |
| 2359                   | 12239                 | 22135             | 2.46                 | 1.5E+00                                       | AJ131402.1               | NT                            | Potato virus A RNA complete genome, isolate U                                                 |
| 2468                   | 12344                 | 22237             | 2.02                 | 1.5E+00                                       | 6678350                  | NT                            | Mus musculus T-cell lymphoma invasion and metastasis-1 (Tiam1), mRNA                          |
| 3099                   | 12239                 | 22135             | 2.22                 | 1.5E+00                                       | AJ131402.1               | NT                            | Potato virus A RNA complete genome, isolate U                                                 |
| 3329                   | 13249                 | 23054             | 0.82                 | 1.5E+00                                       | AE001945.1               | NT                            | Deinococcus radiodurans R1 section 82 of 229 of the complete chromosome 1                     |
| 5856                   | 15762                 | 25880             | 2.71                 | 1.5E+00                                       | R17879.1                 | EST_HUMAN                     | yg10e02.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:31693 5'                    |
| 6230                   | 16096                 |                   | 1.42                 | 1.5E+00                                       | BE765356.1               | EST_HUMAN                     | 601478745F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3881555 5'                               |
| 6250                   | 16116                 | 26268             | 29.13                | 1.5E+00                                       | P47179                   | SWISSPROT                     | HYPOTHETICAL 118.4 KD PROTEIN IN BAT2-DAL5 INTERGENIC REGION PRECURSOR                        |
| 6250                   | 16116                 | 26269             | 29.13                | 1.5E+00                                       | P47179                   | SWISSPROT                     | HYPOTHETICAL 118.4 KD PROTEIN IN BAT2-DAL5 INTERGENIC REGION PRECURSOR                        |
| 7671                   | 17521                 | 27747             | 7.56                 | 1.5E+00                                       | BF376754.1               | EST_HUMAN                     | RC0-TN0078-150900-034-g05 TN0078 Homo sapiens cDNA                                            |
| 7782                   | 17632                 |                   | 1.71                 | 1.5E+00                                       | BF337944.1               | EST_HUMAN                     | 602035771F1 NCI CGAP_Brm64 Homo sapiens cDNA clone IMAGE:4183865 5'                           |
| 7856                   | 17706                 | 27951             | 1.96                 | 1.5E+00                                       | AA017689.1               | EST_HUMAN                     | ze38g06.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:361306 5'                       |
| 7856                   | 17706                 | 27952             | 1.96                 | 1.5E+00                                       | AA017689.1               | EST_HUMAN                     | ze38g06.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:361306 5'                       |
| 8702                   | 18520                 | 28802             | 3.91                 | 1.5E+00                                       | AL134197.1               | EST_HUMAN                     | DKFZp647P243_s1 547 (synonym: hfbt1) Homo sapiens cDNA clone DKFZp647P243 3'                  |
| 8828                   | 18641                 |                   | 10.73                | 1.5E+00                                       | X07380.1                 | NT                            | Maize mitochondrial tRNA-Ser gene and tRNA-Phe pseudogene                                     |
| 9223                   | 18946                 |                   | 1.5                  | 1.5E+00                                       | 6753287                  | NT                            | Mus musculus caspase 8 associated protein 2 (Casp8ap2), mRNA                                  |
| 9596                   | 19178                 |                   | 2.89                 | 1.5E+00                                       | AL445065.1               | NT                            | Thermoplasma acidophilum complete genome; segment 3/5                                         |
| 9690                   | 19243                 |                   | 1.42                 | 1.5E+00                                       | 6978492                  | NT                            | Rattus norvegicus 5 - Lipoxigenase (Alox5), mRNA                                              |
| 27                     | 10014                 | 19808             | 1.28                 | 1.4E+00                                       | 7661685                  | NT                            | Homo sapiens DKFZP586M0122 protein (DKFZP586M0122), mRNA                                      |
| 27                     | 10014                 | 19809             | 1.28                 | 1.4E+00                                       | 7661685                  | NT                            | Homo sapiens DKFZP586M0122 protein (DKFZP586M0122), mRNA                                      |
| 2231                   | 12116                 |                   | 0.95                 | 1.4E+00                                       | AF053357.1               | NT                            | Helicobacter pylori glutamine synthetase (gluA) gene, complete cds                            |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                             |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 2286                   | 12169                 |                   | 9.38                 | 1.4E+00                                       | U67922.1                 | NT                            | Ovis aries prion protein gene, complete cds                                                                                                    |
| 2634                   | 12501                 | 22394             | 1.63                 | 1.4E+00                                       | X74463.1                 | NT                            | Human papillomavirus type 7 genomic DNA                                                                                                        |
| 2746                   | 12608                 | 22500             | 3.29                 | 1.4E+00                                       | AF064584.2               | NT                            | Fugu rubripes neurofibromatosis type 1 (NF1), A-kinase anchor protein (AKAP84), BAW protein (BAW), and WSB1 protein (WSB1) genes, complete cds |
| 2746                   | 12608                 | 22501             | 3.29                 | 1.4E+00                                       | AF064584.2               | NT                            | Fugu rubripes neurofibromatosis type 1 (NF1), A-kinase anchor protein (AKAP84), BAW protein (BAW), and WSB1 protein (WSB1) genes, complete cds |
| 3034                   | 12962                 | 22755             | 1.01                 | 1.4E+00                                       | AE002324.2               | NT                            | Chlamydia muridarum, section 55 of 85 of the complete genome                                                                                   |
| 3034                   | 12962                 | 22756             | 1.01                 | 1.4E+00                                       | AE002324.2               | NT                            | Chlamydia muridarum, section 55 of 85 of the complete genome                                                                                   |
| 3291                   | 13213                 |                   | 0.87                 | 1.4E+00                                       | 5453733                  | NT                            | Homo sapiens Mad4 homolog (MAD4) mRNA                                                                                                          |
| 4162                   | 14062                 | 23835             | 1.09                 | 1.4E+00                                       | AW900455.1               | EST_HUMAN                     | CW0-NN1005-140300-286-106 NN1005 Homo sapiens cDNA                                                                                             |
| 4162                   | 14062                 | 23836             | 1.09                 | 1.4E+00                                       | AW900455.1               | EST_HUMAN                     | CW0-NN1005-140300-286-106 NN1005 Homo sapiens cDNA                                                                                             |
| 4482                   | 14376                 |                   | 1.53                 | 1.4E+00                                       | BF681547.1               | EST_HUMAN                     | 602156687F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4297556 5'                                                                                |
| 5137                   | 15004                 |                   | 0.8                  | 1.4E+00                                       | Q07869                   | SWISSPROT                     | PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR ALPHA (PPAR-ALPHA)                                                                                  |
| 5301                   | 15222                 | 25026             | 1.51                 | 1.4E+00                                       | AW054976.1               | EST_HUMAN                     | w45g07.x1 NCL_OGAP_Pan1 Homo sapiens cDNA clone IMAGE:2510460 3'                                                                               |
| 5394                   | 15313                 |                   | 5.17                 | 1.4E+00                                       | AB032983.1               | NT                            | Homo sapiens mRNA for KIAA1157 protein, partial cds                                                                                            |
| 5796                   | 15702                 | 25812             | 2.39                 | 1.4E+00                                       | Q13472                   | SWISSPROT                     | DNA TOPOISOMERASE III ALPHA                                                                                                                    |
| 5802                   | 19765                 |                   | 4.9                  | 1.4E+00                                       | AB020712.1               | NT                            | Homo sapiens mRNA for KIAA0905 protein, complete cds                                                                                           |
| 5860                   | 15766                 | 25884             | 2.71                 | 1.4E+00                                       | Q92777                   | SWISSPROT                     | SYNAPSIN II                                                                                                                                    |
| 5860                   | 15766                 | 25885             | 2.71                 | 1.4E+00                                       | Q92777                   | SWISSPROT                     | SYNAPSIN II                                                                                                                                    |
| 6318                   | 16181                 | 26341             | 1.86                 | 1.4E+00                                       | AJ133269.1               | NT                            | Homo sapiens caveolin-1/2 locus, Config1, D7S522, genes CAV2 (exons 1, 2a, and 2b), CAV1 (exons 1 and 2)                                       |
| 7107                   | 16984                 |                   | 5.21                 | 1.4E+00                                       | AJ271735.1               | NT                            | Homo sapiens Xq pseudoautosomal region; segment 1/2                                                                                            |
| 7256                   | 17133                 | 27325             | 1.88                 | 1.4E+00                                       | R20459.1                 | EST_HUMAN                     | y933f12.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:34345 5'                                                                     |
| 7303                   | 17179                 | 27381             | 3.37                 | 1.4E+00                                       | BE064667.1               | EST_HUMAN                     | RC1-BT0313-301299-012-f05 BT0313 Homo sapiens cDNA                                                                                             |
| 8420                   | 18294                 | 28548             | 1.94                 | 1.4E+00                                       | AA195528.1               | EST_HUMAN                     | z36e09.r1 Soares_NhiHMPu_S1 Homo sapiens cDNA clone IMAGE:665512 5' similar to contains element                                                |
| 8556                   | 18426                 | 28695             | 4.97                 | 1.4E+00                                       | AB006692.1               | NT                            | MER22 repetitive element                                                                                                                       |
| 8709                   | 18526                 | 28808             | 5.15                 | 1.4E+00                                       | BE962107.2               | EST_HUMAN                     | Homo sapiens APECE2 mRNA for AIRE-1, complete cds                                                                                              |
| 8709                   | 18526                 | 28809             | 5.15                 | 1.4E+00                                       | BE962107.2               | EST_HUMAN                     | 601655184R1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3845805 3'                                                                                |
| 8727                   | 18563                 | 28867             | 2.68                 | 1.4E+00                                       | U30790.1                 | NT                            | 601655184R1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3845805 3'                                                                                |
| 8727                   | 18563                 | 28868             | 2.68                 | 1.4E+00                                       | U30790.1                 | NT                            | Pneumocystis carinii f. sp. ratti guanine nucleotide binding protein alpha subunit (pcg1) gene, complete cds                                   |
| 9221                   | 19604                 |                   | 1.34                 | 1.4E+00                                       | AL161500.2               | NT                            | Pneumocystis carinii f. sp. ratti guanine nucleotide binding protein alpha subunit (pcg1) gene, complete cds                                   |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 558                    | 10498                 |                   | 1.67                 | 1.3E+00                                       | Z73640.1                 | NT                            | M.mucedo gene encoding 4-Dihydropyrimidin-trisporate dehydrogenase                                                                                                                                                                                            |
| 884                    | 10810                 | 20659             | 2.74                 | 1.3E+00                                       | AJ271192.1               | NT                            | Cantharellus sp. partial 25S rRNA gene, isolate Tibet                                                                                                                                                                                                         |
| 1113                   | 11028                 |                   | 16.5                 | 1.3E+00                                       | Y19213.1                 | NT                            | Homo sapiens putative psfHbA pseudogene for hair keratin, exons 2 to 7                                                                                                                                                                                        |
| 1275                   | 11183                 | 21033             | 10.9                 | 1.3E+00                                       | 4507998                  | NT                            | Homo sapiens zinc finger protein 157 (HZF22) (ZNF157) mRNA                                                                                                                                                                                                    |
| 1275                   | 11183                 | 21034             | 10.9                 | 1.3E+00                                       | 4507998                  | NT                            | Homo sapiens zinc finger protein 157 (HZF22) (ZNF157) mRNA                                                                                                                                                                                                    |
| 1334                   | 11241                 |                   | 1.62                 | 1.3E+00                                       | U61730.2                 | NT                            | Coix lacryma-jobi dihydrodipicolinate synthase (dapA) gene, complete cds                                                                                                                                                                                      |
| 1593                   | 11497                 |                   | 2.09                 | 1.3E+00                                       | AE002338.2               | NT                            | Chlamydia muridarum, section 66 of 85 of the complete genome                                                                                                                                                                                                  |
| 2196                   | 12083                 |                   | 2.1                  | 1.3E+00                                       | AB030447.1               | NT                            | Cyprinus carpio MRPb and MASPb genes for mannose-binding lectin-associated serine protease (MASP) and MASP-related protein, complete cds                                                                                                                      |
| 2503                   | 12378                 |                   | 2.19                 | 1.3E+00                                       | BE966735.2               | EST_HUMAN                     | 601661233R1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3915945 3'                                                                                                                                                                                               |
| 2909                   | 12835                 | 22632             | 1.12                 | 1.3E+00                                       | 6755621                  | NT                            | Mus musculus alpha-spectrin 1, erythroid (Spna1), mRNA                                                                                                                                                                                                        |
| 3547                   | 13463                 | 23258             | 1.03                 | 1.3E+00                                       | AF016494.1               | NT                            | Fugu rubripes gamma-aminobutyric acid receptor beta subunit gene, partial cds; 55kd erythrocyte membrane protein (P55), synaptic vesicle-associated integral membrane protein (VAMP-1), procollagen C-proteinase enhancer protein (PCOLCE) genes, complete c> |
| 4502                   | 12835                 | 22632             | 0.82                 | 1.3E+00                                       | 6755621                  | NT                            | Mus musculus alpha-spectrin 1, erythroid (Spna1), mRNA                                                                                                                                                                                                        |
| 4964                   | 14839                 | 24607             | 0.98                 | 1.3E+00                                       | AJ252087.1               | NT                            | Plasmodium reichenowi partial 83/AMA-1 gene for apical membrane antigen 1                                                                                                                                                                                     |
| 4964                   | 14839                 | 24608             | 0.98                 | 1.3E+00                                       | AJ252087.1               | NT                            | Plasmodium reichenowi partial 83/AMA-1 gene for apical membrane antigen 1                                                                                                                                                                                     |
| 5665                   | 15576                 | 25674             | 7.76                 | 1.3E+00                                       | AW362834.1               | EST_HUMAN                     | PM0-CT0289-291199-004-f08 CT0289 Homo sapiens cDNA                                                                                                                                                                                                            |
| 5665                   | 15576                 | 25675             | 7.76                 | 1.3E+00                                       | AW362834.1               | EST_HUMAN                     | PM0-CT0289-291199-004-f08 CT0289 Homo sapiens cDNA                                                                                                                                                                                                            |
| 5864                   | 15770                 | 25889             | 1.33                 | 1.3E+00                                       | M33496.1                 | NT                            | D.melanogaster no-on-transient A gene product, complete cds                                                                                                                                                                                                   |
| 6828                   | 16707                 | 26901             | 1.25                 | 1.3E+00                                       | AJ009912.1               | NT                            | Sus scrofa plp gene                                                                                                                                                                                                                                           |
| 6917                   | 16795                 | 26988             | 3.06                 | 1.3E+00                                       | BE963379.2               | EST_HUMAN                     | 601657145R1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3866195 3'                                                                                                                                                                                               |
| 7054                   | 16931                 |                   | 1.55                 | 1.3E+00                                       | 9910247                  | NT                            | Homo sapiens GL004 protein (GL004), mRNA                                                                                                                                                                                                                      |
| 7480                   | 17350                 |                   | 5.44                 | 1.3E+00                                       | AF042084.1               | NT                            | Homo sapiens heparan glucosaminyl N-deacetylase/N-sulfotransferase-2 gene, complete cds                                                                                                                                                                       |
| 7487                   | 17357                 | 27560             | 2.31                 | 1.3E+00                                       | X72019.1                 | NT                            | S.alba phr-1 mRNA for photolase                                                                                                                                                                                                                               |
| 7487                   | 17357                 | 27561             | 2.31                 | 1.3E+00                                       | X72019.1                 | NT                            | S.alba phr-1 mRNA for photolase                                                                                                                                                                                                                               |
| 7574                   | 17425                 | 27639             | 1.45                 | 1.3E+00                                       | 000754                   | SWISSPROT                     | LYSOSOMAL ALPHA-MANNOSIDASE PRECURSOR (MANNOSIDASE, ALPHA B) (LYSOSOMAL ACID ALPHA-MANNOSIDASE) (LAMAN)                                                                                                                                                       |
| 7620                   | 17471                 | 27690             | 1.27                 | 1.3E+00                                       | A1927629.1               | EST_HUMAN                     | w085a07.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2462100 3'                                                                                                                                                                                            |
| 7675                   | 17525                 | 27751             | 4.9                  | 1.3E+00                                       | BE963379.2               | EST_HUMAN                     | 601657145R1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3866195 3'                                                                                                                                                                                               |
| 7866                   | 17716                 | 27961             | 1.6                  | 1.3E+00                                       | AE004392.1               | NT                            | Vibrio cholerae chromosome II, section 49 of 93 of the complete chromosome                                                                                                                                                                                    |
| 7874                   | 17724                 | 27968             | 1.39                 | 1.3E+00                                       | M29983.1                 | NT                            | Campylobacter jejuni kanamycin phosphotransferase (aphA-7) gene, complete cds                                                                                                                                                                                 |
| 8078                   | 17969                 |                   | 4.3                  | 1.3E+00                                       | Q14117                   | SWISSPROT                     | DIHYDROXYRIMIDINASE (DHPASE) (HYDANTOINASE) (DHP)                                                                                                                                                                                                             |
| 8277                   | 18157                 | 28398             | 2.34                 | 1.3E+00                                       | P25239                   | SWISSPROT                     | MRNA 3'-END PROCESSING PROTEIN RNA15                                                                                                                                                                                                                          |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                             |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|------------------------------------------------------------------------------------------------|
| 8299                   | 18178                 | 28424             | 2.23                 | 1.3E+00                                       | Z18992.2                 | NT                            | Mus musculus desmin gene                                                                       |
| 8646                   | 18510                 |                   | 1.81                 | 1.3E+00                                       | AW274791.1               | EST_HUMAN                     | xp09e03.x1 NCI_CGAP_HN9 Homo sapiens cDNA clone IMAGE:2739968 3'                               |
| 8826                   | 18639                 | 28923             | 2.82                 | 1.3E+00                                       | D42042.1                 | NT                            | Human mRNA for KIAA0085 gene, partial cds                                                      |
| 8895                   | 18705                 | 28999             | 2.71                 | 1.3E+00                                       | Z98882.1                 | NT                            | Bacillus subtilis genomic DNA 23.9kB fragment                                                  |
| 9362                   | 19033                 |                   | 2.35                 | 1.3E+00                                       | AF187873.1               | NT                            | Cavia porcellus inwardly-rectifying potassium channel Kir2.2 (KCNJ12) gene, complete cds       |
| 9533                   | 19139                 | 25263             | 3.24                 | 1.3E+00                                       | BF348043.1               | EST_HUMAN                     | 602023185F1 NCI_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4158452 5'                             |
| 9544                   | 19499                 |                   | 2.68                 | 1.3E+00                                       | P33464                   | SWISSPROT                     | E1 GLYCOPROTEIN PRECURSOR (MATRIX GLYCOPROTEIN) (MEMBRANE GLYCOPROTEIN)                        |
| 634                    | 10571                 | 20384             | 8.14                 | 1.2E+00                                       | AA676246.1               | EST_HUMAN                     | z122d08.s1 Soares fetal liver spleen 1NfLS S1 Homo sapiens cDNA clone IMAGE:431535 3'          |
| 806                    | 10735                 | 20578             | 1.33                 | 1.2E+00                                       | P05228                   | SWISSPROT                     | HISTIDINE-RICH PROTEIN PRECURSOR (CLONE PFHRP-III)                                             |
| 806                    | 10735                 | 20579             | 1.33                 | 1.2E+00                                       | P05228                   | SWISSPROT                     | HISTIDINE-RICH PROTEIN PRECURSOR (CLONE PFHRP-III)                                             |
| 806                    | 10735                 | 20580             | 1.33                 | 1.2E+00                                       | P05228                   | SWISSPROT                     | HISTIDINE-RICH PROTEIN PRECURSOR (CLONE PFHRP-III)                                             |
| 860                    | 10786                 |                   | 2.19                 | 1.2E+00                                       | 8924234                  | NT                            | Homo sapiens hypothetical protein PRO3077 (PRO3077), mRNA                                      |
| 1145                   | 11058                 | 20901             | 5.53                 | 1.2E+00                                       | AF080245.2               | NT                            | Elaeis oleifera sesquiterpene synthase mRNA, complete cds                                      |
| 1187                   | 11097                 | 20943             | 1.77                 | 1.2E+00                                       | AJ252242.1               | NT                            | pea seed-borne mosaic virus complete genome                                                    |
| 1187                   | 11097                 | 20944             | 1.77                 | 1.2E+00                                       | AJ252242.1               | NT                            | pea seed-borne mosaic virus complete genome                                                    |
| 1963                   | 11857                 | 21746             | 1.05                 | 1.2E+00                                       | AF140681.1               | NT                            | Homo sapiens G-protein coupled receptor 14 (GPR14) gene, complete cds                          |
| 3072                   | 12999                 | 22789             | 0.95                 | 1.2E+00                                       | AB020681.1               | NT                            | Homo sapiens mRNA for KIAA0874 protein, partial cds                                            |
| 3128                   | 13053                 | 22851             | 5.41                 | 1.2E+00                                       | AL161563.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 63                                  |
| 3128                   | 13053                 | 22852             | 5.41                 | 1.2E+00                                       | AL161563.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 63                                  |
| 3249                   | 13172                 |                   | 2.9                  | 1.2E+00                                       | P54910                   | SWISSPROT                     | CONJUGAL TRANSFER PROTEIN TRBE PRECURSOR                                                       |
| 3311                   | 13232                 | 23038             | 0.78                 | 1.2E+00                                       | AF188740.1               | NT                            | Homo sapiens LHX3 gene, intron 2                                                               |
| 3312                   | 13233                 |                   | 0.99                 | 1.2E+00                                       | M81779.1                 | NT                            | G.gallus T-cadherin mRNA, complete cds                                                         |
| 3650                   | 13564                 | 23350             | 7.28                 | 1.2E+00                                       | U75902.1                 | NT                            | Mus musculus subtilisin-like serine protease LPC (PC7) gene, exons 1 to 9, partial cds         |
| 3904                   | 13814                 | 23598             | 1.49                 | 1.2E+00                                       | BF373570.1               | EST_HUMAN                     | MR0-FT0175-050900-203-g06_1 FT0175 Homo sapiens cDNA                                           |
| 4201                   | 13232                 | 23038             | 1.09                 | 1.2E+00                                       | AF188740.1               | NT                            | Homo sapiens LHX3 gene, intron 2                                                               |
| 4298                   | 14196                 | 23981             | 1.39                 | 1.2E+00                                       | 6980951                  | NT                            | Rattus norvegicus Glycine receptor alpha 2 subunit (glycine receptor, neonatal) (Glrar2), mRNA |
| 4371                   | 14267                 |                   | 1.64                 | 1.2E+00                                       | M87060.1                 | NT                            | Rattus rattus cardiac AE3 gene, exons 1-23                                                     |
| 4422                   | 14316                 | 24102             | 1.26                 | 1.2E+00                                       | AL161509.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 21                                  |
| 4460                   | 14354                 | 24145             | 1.82                 | 1.2E+00                                       | AF186495.1               | NT                            | Homo sapiens post-synaptic density 95 (DLG4) gene, complete cds                                |
| 4485                   | 14379                 |                   | 5.44                 | 1.2E+00                                       | Y09200.1                 | NT                            | T.pinnatum chloroplast rbcL gene, partial                                                      |
| 4584                   | 13233                 |                   | 0.94                 | 1.2E+00                                       | M81779.1                 | NT                            | G.gallus T-cadherin mRNA, complete cds                                                         |
| 5409                   | 15329                 | 25379             | 1.96                 | 1.2E+00                                       | AW813276.1               | EST_HUMAN                     | MR3-ST0191-140200-013-c08 ST0191 Homo sapiens cDNA                                             |
| 5739                   | 15647                 | 25763             | 2.47                 | 1.2E+00                                       | X74885.1                 | NT                            | D.hydrel av1 repeat cluster DNA, fragment D                                                    |
| 5769                   | 15676                 | 25783             | 3.28                 | 1.2E+00                                       | BE003113.1               | EST_HUMAN                     | QV4-BN0090-270400-190-a03 BN0090 Homo sapiens cDNA                                             |



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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                  |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| 5798                   | 15704                 | 25815             | 1.87                 | 1.2E+00                                       | X89084.1                 | NT                            | C. glutamicum pia gene and ackA gene                                                |
| 5798                   | 15704                 | 25816             | 1.87                 | 1.2E+00                                       | X89084.1                 | NT                            | C. glutamicum pia gene and ackA gene                                                |
| 5923                   | 15729                 | 25841             | 32.83                | 1.2E+00                                       | AA759254.1               | EST_HUMAN                     | ah94g12.s1 Soares. testis_NHT Homo sapiens cDNA clone 1322374 3'                    |
| 5918                   | 15823                 | 25949             | 1.82                 | 1.2E+00                                       | AW813276.1               | EST_HUMAN                     | MR3-ST0191-140200-013-c05 ST0191 Homo sapiens cDNA                                  |
| 6139                   | 15986                 | 26121             | 2.55                 | 1.2E+00                                       | AJ002141.1               | NT                            | Mus musculus DSPP gene                                                              |
| 6369                   | 19463                 | 26392             | 1.9                  | 1.2E+00                                       | AV734585.1               | EST_HUMAN                     | AV734585 cda Homo sapiens cDNA clone cdAAFH03 5'                                    |
| 6508                   | 16367                 | 26544             | 2.4                  | 1.2E+00                                       | X74207.1                 | NT                            | L. lactis pyrD and pyrF genes                                                       |
| 6984                   | 16861                 | 27055             | 3.45                 | 1.2E+00                                       | AB033030.1               | NT                            | Homo sapiens mRNA for KIAA1204 protein, partial cds                                 |
| 7218                   | 17095                 | 27285             | 1.74                 | 1.2E+00                                       | AW377210.1               | EST_HUMAN                     | MR2-CT0222-201089-001-e07 CT0222 Homo sapiens cDNA                                  |
| 7407                   | 17274                 | 27480             | 3.08                 | 1.2E+00                                       | Z32850.1                 | NT                            | R. communis gene for pyrophosphate-dependent phosphofructokinase beta subunit       |
| 7540                   | 17391                 | 27601             | 1.8                  | 1.2E+00                                       | D11745.1                 | EST_HUMAN                     | HUMHM01A01 Liver: HepG2 cell line. Homo sapiens cDNA clone hm01a01                  |
| 7711                   | 17561                 | 27786             | 3.28                 | 1.2E+00                                       | X56832.1                 | NT                            | H. sapiens ENO3 gene for muscle specific enolase                                    |
| 8653                   | 18542                 | 28826             | 2.03                 | 1.2E+00                                       | AW817817.1               | EST_HUMAN                     | PMO-ST0264-161199-001-d01 ST0264 Homo sapiens cDNA                                  |
| 8689                   | 18576                 |                   | 23.47                | 1.2E+00                                       | BE160781.1               | EST_HUMAN                     | PM1-HT0422-160200-007-g10 HT0422 Homo sapiens cDNA                                  |
| 8752                   | 17901                 | 28145             | 4.87                 | 1.2E+00                                       | U50147.1                 | NT                            | Rattus norvegicus synapse-associated protein 102 mRNA, complete cds                 |
| 9114                   | 18877                 | 28787             | 2.5                  | 1.2E+00                                       | AF065398.1               | NT                            | Mus musculus 60 kDa ribonucleoprotein SSA/Ro gene, complete cds                     |
| 9330                   | 19572                 | 25067             | 15.4                 | 1.2E+00                                       | AL163203.2               | NT                            | Homo sapiens chromosome 21 segment HS21C003                                         |
| 9349                   | 19025                 |                   | 1.49                 | 1.2E+00                                       | AP001515.1               | NT                            | Bacillus halodurans genomic DNA, section 9/14                                       |
| 456                    | 10400                 | 20217             | 1.13                 | 1.1E+00                                       | D86980.1                 | NT                            | Human mRNA for KIAA0227 gene, partial cds                                           |
| 1726                   | 11627                 | 21496             | 1.39                 | 1.1E+00                                       | AW995393.1               | EST_HUMAN                     | QV0-BN0042-170300-163-g12 BN0042 Homo sapiens cDNA                                  |
| 1857                   | 11753                 | 21628             | 0.92                 | 1.1E+00                                       | AW575889.1               | EST_HUMAN                     | UI-HF-BR0p-alk-f-02-Q-UI.s1 NIH_MGC_52 Homo sapiens cDNA clone IMAGE:3074834 3'     |
| 3288                   | 13209                 | 23009             | 6.61                 | 1.1E+00                                       | AL163213.2               | NT                            | Homo sapiens chromosome 21 segment HS21C013                                         |
| 3288                   | 13209                 | 23010             | 6.61                 | 1.1E+00                                       | AL163213.2               | NT                            | Homo sapiens chromosome 21 segment HS21C013                                         |
| 3441                   | 13358                 | 23165             | 0.93                 | 1.1E+00                                       | 8922641                  | NT                            | Homo sapiens hypothetical protein FLJ110749 (FLJ110749), mRNA                       |
| 3510                   | 13426                 |                   | 1.26                 | 1.1E+00                                       | 8922973                  | NT                            | Homo sapiens hypothetical protein FLJ11280 (FLJ11280), mRNA                         |
| 3531                   | 13447                 | 23244             | 0.99                 | 1.1E+00                                       | AI808360.1               | EST_HUMAN                     | wf54h11 x1 Soares. NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2359461 3' similar to |
| 3657                   | 13571                 | 23357             | 1.16                 | 1.1E+00                                       | AE003886.1               | NT                            | SW:P531_HUMAN Q12888 P53-BINDING PROTEIN 53BP1 ;                                    |
| 3657                   | 13571                 | 23358             | 1.16                 | 1.1E+00                                       | AE003886.1               | NT                            | Xyella fastidiosa, section 32 of 229 of the complete genome                         |
| 3678                   | 13592                 | 23378             | 17.81                | 1.1E+00                                       | 5729757                  | NT                            | Xyella fastidiosa, section 32 of 229 of the complete genome                         |
| 3662                   | 13773                 | 23565             | 0.99                 | 1.1E+00                                       | 8922641                  | NT                            | Homo sapiens calpain 9 (nCL-4) (CAPN9) mRNA                                         |
| 4122                   | 14022                 |                   | 5.89                 | 1.1E+00                                       | 5835331                  | NT                            | Homo sapiens hypothetical protein FLJ10749 (FLJ10749), mRNA                         |
| 4860                   | 14740                 | 24520             | 1.18                 | 1.1E+00                                       | L23195.1                 | NT                            | R. unicomis complete mitochondrial genome                                           |
| 4921                   | 14800                 | 24573             | 2.92                 | 1.1E+00                                       | U18466.1                 | NT                            | Drosophila melanogaster cytoplasmic dynein heavy chain mRNA, complete cds           |
|                        |                       |                   |                      |                                               |                          |                               | African swine fever virus, complete genome                                          |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 4909                   | 14874                 | 24638             | 1.16                 | 1.1E+00                                       | X78425.1                 | NT                            | E.faecalis pbp5 gene                                                                                                              |
| 5249                   | 15172                 | 24945             | 1.57                 | 1.1E+00                                       | 6978530                  | NT                            | Rattus norvegicus Aquaporin 4 (Aqp4), mRNA                                                                                        |
| 5449                   | 15370                 | 25426             | 12.04                | 1.1E+00                                       | BE960184.1               | EST_HUMAN                     | 601652770R1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:3825635 3'                                                                   |
| 5460                   | 15380                 | 25440             | 1.29                 | 1.1E+00                                       | AI138582.1               | EST_HUMAN                     | qd85c03.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1736260 3'                                                             |
| 6422                   | 16283                 | 26444             | 1.93                 | 1.1E+00                                       | Z72338.1                 | NT                            | Herpes simplex virus type 1 (strain KOS) UL41 gene                                                                                |
| 6422                   | 16283                 | 26445             | 1.93                 | 1.1E+00                                       | Z72338.1                 | NT                            | Herpes simplex virus type 1 (strain KOS) UL41 gene                                                                                |
| 6435                   | 16296                 | 26458             | 7.53                 | 1.1E+00                                       | AL161588.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 84                                                                     |
| 6728                   | 16608                 | 26799             | 3.22                 | 1.1E+00                                       | BF693996.1               | EST_HUMAN                     | 602082582F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4246628 5'                                                                   |
| 7658                   | 17508                 | 27733             | 1.65                 | 1.1E+00                                       | AB023151.1               | NT                            | Homo sapiens mRNA for KIAA0934 protein, partial cds                                                                               |
| 7715                   | 17665                 | 27791             | 4.39                 | 1.1E+00                                       | AL161515.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 27                                                                     |
| 7744                   | 17594                 | 27815             | 20.08                | 1.1E+00                                       | 6754021                  | NT                            | Mus musculus guanine nucleotide binding protein (G protein), gamma 3 subunit (Gng3), mRNA                                         |
| 8043                   | 17934                 | 28182             | 2.65                 | 1.1E+00                                       | 11067364                 | NT                            | Homo sapiens KIAA0626 gene product (KIAA0626), mRNA                                                                               |
| 8090                   | 17981                 |                   | 3.41                 | 1.1E+00                                       | AF068942.1               | NT                            | Klebsormidium fluitans cytochrome c oxidase subunit 2 (cox2) gene, mitochondrial gene encoding mitochondrial protein, partial cds |
| 8447                   | 13426                 |                   | 5.73                 | 1.1E+00                                       | 8922973                  | NT                            | Homo sapiens hypothetical protein FLJ11280 (FLJ11280), mRNA                                                                       |
| 8450                   | 18323                 | 28581             | 4.41                 | 1.1E+00                                       | AF012892.1               | NT                            | Petrosselinum crispum cytosolic glucose-6-phosphate dehydrogenase 1 (cG6PDH1) mRNA, complete cds                                  |
| 8450                   | 18323                 | 28582             | 4.41                 | 1.1E+00                                       | AF012892.1               | NT                            | Petrosselinum crispum cytosolic glucose-6-phosphate dehydrogenase 1 (cG6PDH1) mRNA, complete cds                                  |
| 8662                   | 18551                 | 28835             | 4.73                 | 1.1E+00                                       | AI809693.1               | EST_HUMAN                     | wf76e11.x1 Soares_NFL_I_GBC_S1 Homo sapiens cDNA clone IMAGE:2361548 3'                                                           |
| 9300                   | 18999                 |                   | 4                    | 1.1E+00                                       | P07866                   | SWISSPROT                     | LOW TEMPERATURE ESSENTIAL PROTEIN                                                                                                 |
| 9402                   | 19056                 | 28310             | 2.13                 | 1.1E+00                                       | AF216696.1               | NT                            | Taenia solium immunogenic protein Ts76 mRNA, partial cds                                                                          |
| 9523                   | 19570                 |                   | 1.54                 | 1.1E+00                                       | AF234169.1               | NT                            | Dictyostelium discoideum isopenicillin N pyrophosphate isomerase (Dip) mRNA, complete cds                                         |
| 92                     | 10077                 |                   | 3.49                 | 1.0E+00                                       | U23808.1                 | NT                            | Xenopus laevis rhodopsin gene, complete cds                                                                                       |
| 108                    | 10089                 | 19904             | 1.14                 | 1.0E+00                                       | D88425.1                 | NT                            | Cavia cobaya mRNA for serine/threonine kinase, complete cds                                                                       |
| 412                    | 10368                 |                   | 2.16                 | 1.0E+00                                       | AB021694.1               | NT                            | Marchantia polymorpha genes for 26S rRNA, 5S rRNA, 18S rRNA, 5.8S rRNA and 26S rRNA                                               |
| 562                    | 10502                 | 20308             | 1.14                 | 1.0E+00                                       | AJ251690.1               | NT                            | Giardia tigrina mRNA for homeodomain transcription factor (so gene)                                                               |
| 661                    | 10595                 | 20473             | 4.51                 | 1.0E+00                                       | AL163218.2               | NT                            | Homo sapiens chromosome 21 segment HS21C018                                                                                       |
| 663                    | 10597                 |                   | 0.95                 | 1.0E+00                                       | AF125994.1               | NT                            | Aedes aegypti mucin-like protein MUC1 mRNA, complete cds                                                                          |
| 1364                   | 12692                 |                   | 1.04                 | 1.0E+00                                       | X80416.1                 | NT                            | V.carteri Algal-CAM mRNA                                                                                                          |
| 1722                   | 11623                 | 21492             | 1.32                 | 1.0E+00                                       | AB006531.1               | NT                            | Plautia stali intestine virus RNA for nonstructural polyprotein, capsid protein precursor, complete cds                           |
| 2435                   | 12312                 | 22208             | 1.4                  | 1.0E+00                                       | P48355                   | SWISSPROT                     | DNA GYRASE SUBUNIT B                                                                                                              |
| 2435                   | 12312                 | 22209             | 1.4                  | 1.0E+00                                       | P48355                   | SWISSPROT                     | DNA GYRASE SUBUNIT B                                                                                                              |

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|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2651                   | 12518                 | 22408             | 1.09                 | 1.0E+00                                       | AF131205.1               | NT                            | Mus musculus Serf1 protein (Serf1), survival of motor neuron protein (Snm), neuronal apoptosis inhibitory protein-rs6 (Naip-rs6), and neuronal apoptosis inhibitory protein-rs3 (Naip-rs3) genes, complete cds |
| 2846                   | 12774                 | 22561             | 3.48                 | 1.0E+00                                       | P24008                   | SWISSPROT                     | 3-OXO-5-ALPHA-STEROID 4-DEHYDROGENASE 1 (STEROID 5-ALPHA-REDUCTASE 1) (SR TYPE 1)                                                                                                                              |
| 2846                   | 12774                 | 22562             | 3.48                 | 1.0E+00                                       | P24008                   | SWISSPROT                     | 3-OXO-5-ALPHA-STEROID 4-DEHYDROGENASE 1 (STEROID 5-ALPHA-REDUCTASE 1) (SR TYPE 1)                                                                                                                              |
| 2938                   | 12865                 |                   | 0.99                 | 1.0E+00                                       | O14226                   | SWISSPROT                     | HYPOTHETICAL 67.9 KD PROTEIN C6F12.08C IN CHROMOSOME I                                                                                                                                                         |
| 3162                   | 13087                 | 22891             | 1.17                 | 1.0E+00                                       | AA628453.1               | EST_HUMAN                     | af2608.s1 Soares, total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1032830 3' similar to WP:C42D8.3 CE04204; contains element MER22 MER22 repetitive element;                                               |
| 3327                   | 13247                 |                   | 0.81                 | 1.0E+00                                       | AF222761.1               | NT                            | Rattus norvegicus neuromedin U precursor (NmU) gene, exons 5 and 6                                                                                                                                             |
| 3548                   | 10077                 |                   | 1.15                 | 1.0E+00                                       | U28808.1                 | NT                            | Xenopus laevis rhodopsin gene, complete cds                                                                                                                                                                    |
| 3627                   | 13541                 | 23328             | 1.44                 | 1.0E+00                                       | AJ223816.1               | NT                            | Agaricus bisporus mRNA for tyrosinase                                                                                                                                                                          |
| 3978                   | 13885                 | 23660             | 0.86                 | 1.0E+00                                       | AF223391.1               | NT                            | Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced                                                                                                |
| 4178                   | 14078                 |                   | 0.79                 | 1.0E+00                                       | 8922245                  | NT                            | Homo sapiens hypothetical protein FLJ10139 (FLJ10139), mRNA                                                                                                                                                    |
| 4815                   | 14698                 |                   | 0.88                 | 1.0E+00                                       | U75741.1                 | NT                            | Taenia ovis 45W antigen (ToW4) gene, complete cds                                                                                                                                                              |
| 4951                   | 14828                 |                   | 0.88                 | 1.0E+00                                       | D10852.1                 | NT                            | Rattus norvegicus mRNA for N-acetylglucosaminyltransferase III, complete cds                                                                                                                                   |
| 5139                   | 15006                 | 24777             | 0.87                 | 1.0E+00                                       | AJ223978.1               | NT                            | Bacillus subtilis 42.7kB DNA fragment from ysaA to ysaA                                                                                                                                                        |
| 5228                   | 15152                 | 24919             | 2.49                 | 1.0E+00                                       | Z97022.1                 | NT                            | Hordeum vulgare gene encoding cysteine proteinase                                                                                                                                                              |
| 5568                   | 15484                 | 25557             | 4.31                 | 1.0E+00                                       | AF248054.1               | NT                            | Bos taurus micromolar calcium activated neutral protease 1 (CAPN1) gene, exons 11-20, and partial cds                                                                                                          |
| 5568                   | 15484                 | 25558             | 4.31                 | 1.0E+00                                       | AF248054.1               | NT                            | Bos taurus micromolar calcium activated neutral protease 1 (CAPN1) gene, exons 11-20, and partial cds                                                                                                          |
| 5719                   | 15626                 | 25729             | 4.82                 | 1.0E+00                                       | P04501                   | SWISSPROT                     | FIBRIN PROTEIN                                                                                                                                                                                                 |
| 5720                   | 15627                 | 25730             | 1.39                 | 1.0E+00                                       | AW452782.1               | EST_HUMAN                     | U1-H-B13-ak-d-09-0-UI-s1 NCI CGAP Sub5 Homo sapiens cDNA clone IMAGE:3068969 3'                                                                                                                                |
| 5908                   | 15814                 | 25939             | 2.21                 | 1.0E+00                                       | U75902.1                 | NT                            | Mus musculus subtilisin-like serine protease LPC (PC7) gene, exons 1 to 9, partial cds                                                                                                                         |
| 6417                   | 16279                 |                   | 8.43                 | 1.0E+00                                       | P20273                   | SWISSPROT                     | B-CELL RECEPTOR CD22 PRECURSOR (LEU-14) (B-LYMPHOCYTE CELL ADHESION MOLECULE) (BL-CAM)                                                                                                                         |
| 6537                   | 16395                 | 26574             | 1.34                 | 1.0E+00                                       | AF192531.1               | NT                            | Homo sapiens endolysin-converting enzyme 2 (ECE2) mRNA, complete cds                                                                                                                                           |
| 6546                   | 16404                 | 26583             | 5.99                 | 1.0E+00                                       | AA775191.1               | EST_HUMAN                     | ac79008.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:868791 3'                                                                                                                                   |
| 6641                   | 16521                 | 26713             | 1.71                 | 1.0E+00                                       | BE868267.1               | EST_HUMAN                     | 601443950F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3848005 5'                                                                                                                                                |
| 6641                   | 16521                 | 26714             | 1.71                 | 1.0E+00                                       | BE868267.1               | EST_HUMAN                     | 601443950F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3848005 5'                                                                                                                                                |
| 6734                   | 14828                 |                   | 1.38                 | 1.0E+00                                       | D10852.1                 | NT                            | Rattus norvegicus mRNA for N-acetylglucosaminyltransferase III, complete cds                                                                                                                                   |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                       |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6861                   | 16740                 | 26932             | 2.7                  | 1.0E+00                                       | Q02207                   | SWISSPROT                     | PEROXISOMAL HYDRATASE-DEHYDROGENASE-EPIMERASE (HDE) (MULTIFUNCTIONAL BETA-OXIDATION PROTEIN) (MFP) [INCLUDES: 2-ENOYL-COA HYDRATASE ; D-3-HYDROXYACYL COA DEHYDROGENASE] |
| 6861                   | 16740                 | 26933             | 2.7                  | 1.0E+00                                       | Q02207                   | SWISSPROT                     | PEROXISOMAL HYDRATASE-DEHYDROGENASE-EPIMERASE (HDE) (MULTIFUNCTIONAL BETA-OXIDATION PROTEIN) (MFP) [INCLUDES: 2-ENOYL-COA HYDRATASE ; D-3-HYDROXYACYL COA DEHYDROGENASE] |
| 6967                   | 19466                 |                   | 2.01                 | 1.0E+00                                       | BE147331.1               | EST_HUMAN                     | RC1-HT0229-181099-011-e06 HT0229 Homo sapiens cDNA                                                                                                                       |
| 7064                   | 16941                 | 27133             | 1.9                  | 1.0E+00                                       | M38427.1                 | NT                            | Human immunodeficiency virus type 1 (HIV-1), isolate SF33,                                                                                                               |
| 7339                   | 17207                 | 27405             | 1.76                 | 1.0E+00                                       | BE907592.1               | EST_HUMAN                     | 601497581F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3899421 5'                                                                                                          |
| 7460                   | 17320                 | 27526             | 1.28                 | 1.0E+00                                       | 6763429                  | NT                            | Mus musculus chloride channel calcium activated 1 (Clcat1), mRNA                                                                                                         |
| 7460                   | 17320                 | 27527             | 1.28                 | 1.0E+00                                       | 6763429                  | NT                            | Mus musculus chloride channel calcium activated 1 (Clcat1), mRNA                                                                                                         |
| 7544                   | 17395                 | 27607             | 2.03                 | 1.0E+00                                       | AV669554.1               | EST_HUMAN                     | AV669554 GK6 Homo sapiens cDNA clone GKCCYA11 5'                                                                                                                         |
| 7546                   | 17397                 | 27609             | 1.2                  | 1.0E+00                                       | U44952.1                 | NT                            | Xenopus laevis zona pellucida C glycoprotein precursor (XZPC) mRNA, complete cds                                                                                         |
| 7546                   | 17397                 | 27610             | 1.2                  | 1.0E+00                                       | U44952.1                 | NT                            | Xenopus laevis zona pellucida C glycoprotein precursor (XZPC) mRNA, complete cds                                                                                         |
| 7916                   | 17766                 | 28005             | 2.83                 | 1.0E+00                                       | AV758825.1               | EST_HUMAN                     | AV758825 BM Homo sapiens cDNA clone BMFAW04 5'                                                                                                                           |
| 7985                   | 17835                 | 28075             | 17.08                | 1.0E+00                                       | AA004982.1               | EST_HUMAN                     | zh94a02.1 Scores_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:428906 5'                                                                                     |
| 7985                   | 17835                 | 28076             | 17.08                | 1.0E+00                                       | AA004982.1               | EST_HUMAN                     | zh94a02.1 Scores_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:428906 5'                                                                                     |
| 9193                   | 18928                 |                   | 2.05                 | 1.0E+00                                       | P15306                   | SWISSPROT                     | THROMBOMODULIN PRECURSOR (FETOMODULIN) (TM)                                                                                                                              |
| 9513                   | 19126                 |                   | 1.51                 | 1.0E+00                                       | AW976184.1               | EST_HUMAN                     | EST388293 MAGE resequences, MAGN Homo sapiens cDNA                                                                                                                       |
| 9689                   | 19380                 |                   | 1.67                 | 1.0E+00                                       | AB040950.1               | NT                            | Homo sapiens mRNA for KIAA1517 protein, partial cds                                                                                                                      |
| 1563                   | 11458                 | 21315             | 0.84                 | 9.9E-01                                       | AF245455.1               | NT                            | Drosophila melanogaster regulator of G-protein signalling LOCO III mRNA, complete cds                                                                                    |
| 1563                   | 11458                 | 21316             | 0.84                 | 9.9E-01                                       | AF245455.1               | NT                            | Drosophila melanogaster regulator of G-protein signalling LOCO III mRNA, complete cds                                                                                    |
| 2598                   | 12467                 | 22360             | 0.9                  | 9.9E-01                                       | AL163302.2               | NT                            | Homo sapiens chromosome 21 segment HS21C102                                                                                                                              |
| 3553                   | 13468                 |                   | 1.18                 | 9.9E-01                                       | AF174595.1               | NT                            | Apple mosaic virus RNA 2 putative polymerase gene, complete cds                                                                                                          |
| 5461                   | 15381                 | 25441             | 9.22                 | 9.9E-01                                       | P49657                   | SWISSPROT                     | SERINE/THREONINE PROTEIN KINASE MINIBRAIN                                                                                                                                |
| 7336                   | 17204                 |                   | 1.38                 | 9.9E-01                                       | U66667.1                 | NT                            | Lycopodium esculentum putative M11 copy 1 nematode-resistance gene                                                                                                       |
| 7510                   | 17298                 |                   | 2.43                 | 9.9E-01                                       | Q28642                   | SWISSPROT                     | B2 BRADYKININ RECEPTOR (BK-2 RECEPTOR)                                                                                                                                   |
| 8097                   | 17988                 | 28237             | 2.92                 | 9.9E-01                                       | AJ005029.1               | NT                            | Danio rerio mRNA for Eph-like receptor tyrosine kinase rtk8                                                                                                              |
| 512                    | 10454                 | 20265             | 2.32                 | 9.8E-01                                       | P22667                   | SWISSPROT                     | AMINO-ACID ACETYLTRANSFERASE (N-ACETYLGLUTAMATE SYNTHASE) (AGS) (NAGS)                                                                                                   |
| 3732                   | 13644                 | 23429             | 0.82                 | 9.8E-01                                       | BE957439.2               | EST_HUMAN                     | 601653583R2 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:3838461 3'                                                                                                          |
| 3732                   | 13644                 | 23430             | 0.82                 | 9.8E-01                                       | BE957439.2               | EST_HUMAN                     | 601653583R2 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:3838461 3'                                                                                                          |
| 6272                   | 16137                 | 26292             | 4.61                 | 9.8E-01                                       | AJ302158.1               | NT                            | Enterobacteriaceae sp. JM983 partial groES gene for GroES-like protein and partial groEL gene for GroEL-like protein, isolate JM983                                      |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6272                   | 16137                 | 26293             | 4.61                 | 9.8E-01                                       | AJ302158.1               | NT                            | Enterobacteriaceae sp. JM983 partial groES gene for GroES-like protein and partial groEL gene for GroEL-like protein, isolate JM983                                                                                                                           |
| 8362                   | 18239                 | 28487             | 4.43                 | 9.8E-01                                       | BE258705.1               | EST_HUMAN                     | 601110258F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350750 5'                                                                                                                                                                                               |
| 8362                   | 18239                 | 28488             | 4.43                 | 9.8E-01                                       | BE258705.1               | EST_HUMAN                     | 601110258F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350750 5'                                                                                                                                                                                               |
| 9408                   | 19061                 |                   | 1.62                 | 9.8E-01                                       | U52111.2                 | NT                            | Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenoleukodystrophy protein > |
| 5106                   | 14974                 |                   | 1.01                 | 9.7E-01                                       | AI660384.1               | EST_HUMAN                     | we62e04.x1 Soares_thymus_NHFTn Homo sapiens cDNA clone IMAGE:2345694 3'                                                                                                                                                                                       |
| 6248                   | 16114                 | 26266             | 2.37                 | 9.7E-01                                       | U26716.1                 | NT                            | Drosophila melanogaster sodium channel protein (para) gene, exons 9,10,11,12 and optional segments b, c, d and e, partial cds                                                                                                                                 |
| 6952                   | 16830                 | 27023             | 1.86                 | 9.7E-01                                       | AF149112.1               | NT                            | Triticum aestivum stripe rust resistance protein Yr10 (Yr10) gene, complete cds                                                                                                                                                                               |
| 6954                   | 16832                 | 27025             | 1.74                 | 9.7E-01                                       | M90544.1                 | NT                            | Salmonella typhimurium adenine-methyltransferase (mod) and restriction endonuclease (res)                                                                                                                                                                     |
| 8510                   | 18382                 |                   | 4.52                 | 9.7E-01                                       | BF511209.1               | EST_HUMAN                     | UI-H-B14-act-e-07-0.U1.s1 NCI CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3085140 3'                                                                                                                                                                              |
| 9956                   | 19419                 |                   | 1.39                 | 9.7E-01                                       | AL114281.1               | NT                            | Bokrytis chirensa strain T4 cDNA library under conditions of nitrogen deprivation                                                                                                                                                                             |
| 4337                   | 14234                 | 24016             | 6.8                  | 9.6E-01                                       | AF197925.1               | NT                            | Bromus inermis putative cytosolic phosphoglucomutase (pgm1) mRNA, complete cds                                                                                                                                                                                |
| 4337                   | 14234                 | 24017             | 6.8                  | 9.6E-01                                       | AF197925.1               | NT                            | Bromus inermis putative cytosolic phosphoglucomutase (pgm1) mRNA, complete cds                                                                                                                                                                                |
| 4355                   | 14251                 | 24036             | 1.3                  | 9.6E-01                                       | AW799674.1               | EST_HUMAN                     | PM2-UM0053-240300-005-f12 UM0053 Homo sapiens cDNA                                                                                                                                                                                                            |
| 5083                   | 14953                 | 24729             | 0.92                 | 9.6E-01                                       | 7662375                  | NT                            | Homo sapiens KIAA0914 gene product (KIAA0914), mRNA                                                                                                                                                                                                           |
| 5517                   | 15435                 | 25498             | 3.46                 | 9.6E-01                                       | Z70556.1                 | NT                            | Parvovirus B19 DNA, patient C, genome position 2448-2994                                                                                                                                                                                                      |
| 5517                   | 15435                 | 25499             | 3.46                 | 9.6E-01                                       | Z70556.1                 | NT                            | Parvovirus B19 DNA, patient C, genome position 2448-2994                                                                                                                                                                                                      |
| 6890                   | 16769                 |                   | 1.37                 | 9.6E-01                                       | X95275.1                 | NT                            | P. falciparum complete gene map of plasid-like DNA (IR-A)                                                                                                                                                                                                     |
| 8808                   | 18622                 | 28912             | 4.15                 | 9.6E-01                                       | AV752605.1               | EST_HUMAN                     | AV752605 NPD Homo sapiens cDNA clone NPDBAG06 5'                                                                                                                                                                                                              |
| 8808                   | 18622                 | 28913             | 4.15                 | 9.6E-01                                       | AV752605.1               | EST_HUMAN                     | AV752605 NPD Homo sapiens cDNA clone NPDBAG06 5'                                                                                                                                                                                                              |
| 9709                   | 19646                 | 24989             | 1.52                 | 9.6E-01                                       | U91423.1                 | NT                            | Sphyrna tiburo NADH dehydrogenase subunit 2 (NADH2) gene, mitochondrial gene encoding mitochondrial protein, partial cds                                                                                                                                      |
| 3715                   | 13627                 | 23410             | 1.6                  | 9.5E-01                                       | BE902340.1               | EST_HUMAN                     | 601675639F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3958473 5'                                                                                                                                                                                               |
| 3715                   | 13627                 | 23411             | 1.6                  | 9.5E-01                                       | BE902340.1               | EST_HUMAN                     | 601675639F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3958473 5'                                                                                                                                                                                               |
| 7266                   | 17143                 | 27336             | 1.17                 | 9.5E-01                                       | AW861102.1               | EST_HUMAN                     | RC1-CT0295-241199-011-b02 CT0295 Homo sapiens cDNA                                                                                                                                                                                                            |
| 3165                   | 13090                 |                   | 3.37                 | 9.4E-01                                       | AF165980.1               | NT                            | Bartonella claridigiae RNA polymerase beta subunit (rpoB) gene, partial cds                                                                                                                                                                                   |
| 3181                   | 13106                 |                   | 1.67                 | 9.4E-01                                       | AF080595.1               | NT                            | Pimpinella brachycarpa zinc finger protein (ZFP1) mRNA, complete cds                                                                                                                                                                                          |
| 9354                   | 19029                 |                   | 1.64                 | 9.4E-01                                       | BE781251.1               | EST_HUMAN                     | 601466703F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3869929 5'                                                                                                                                                                                               |
| 9708                   | 19564                 |                   | 1.43                 | 9.4E-01                                       | 11419857                 | NT                            | Homo sapiens epidermal growth factor receptor (avian erythroblastic leukemia viral (v-erb-b) oncogene homolog) (EGFR), mRNA                                                                                                                                   |
| 1700                   | 11601                 |                   | 1.11                 | 9.3E-01                                       | AF242382.1               | NT                            | Homo sapiens phytoeyl-CoA hydroxylase (PHYH) gene, exon 5                                                                                                                                                                                                     |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2594                   | 12464                 | 22357             | 1.13                 | 9.3E-01                                       | BE071172.1               | EST_HUMAN                     | RC5-BT0503-271169-011-B01 BT0503 Homo sapiens cDNA                                                                                                                                                                                                            |
| 3949                   | 13857                 | 23630             | 0.82                 | 9.3E-01                                       | M20219.1                 | NT                            | Bovine papillomavirus type 2, complete genome                                                                                                                                                                                                                 |
| 3949                   | 13857                 | 23631             | 0.82                 | 9.3E-01                                       | M20219.1                 | NT                            | Bovine papillomavirus type 2, complete genome                                                                                                                                                                                                                 |
| 5155                   | 15022                 |                   | 1.54                 | 9.3E-01                                       | AF075515.1               | NT                            | Equus caballus microsatellite LEX013                                                                                                                                                                                                                          |
| 5434                   | 15354                 | 25410             | 1.62                 | 9.3E-01                                       | AF213884.1               | NT                            | Homo sapiens nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (NFKB1) gene, complete cds                                                                                                                                                  |
| 5482                   | 15402                 | 25465             | 3.84                 | 9.3E-01                                       | L36189.1                 | NT                            | Spodoptera frugiperda methylenetetrahydrofolate dehydrogenase mRNA, complete cds                                                                                                                                                                              |
| 6701                   | 16581                 | 26771             | 1.88                 | 9.3E-01                                       | AA847040.1               | EST_HUMAN                     | oe09b03.s1 NCL_CGAP_Ov2 Homo sapiens cDNA clone IMAGE:1385357                                                                                                                                                                                                 |
| 9822                   | 19325                 |                   | 1.56                 | 9.3E-01                                       | AF271207.1               | NT                            | Aedes triseriatus putative large subunit ribosomal protein rpl34 mRNA, complete cds                                                                                                                                                                           |
| 9954                   | 19418                 |                   | 1.38                 | 9.3E-01                                       | U82571.2                 | NT                            | Homo sapiens chromosome Xq28 melanoma antigen family A2a (MAGEA2A), melanoma antigen family A12 (MAGEA12), melanoma antigen family A2b (MAGEA2B), melanoma antigen family A3 (MAGEA3), caltractin (CALT), NAD(P)H dehydrogenase-like protein (NSDHL), and LI> |
| 3201                   | 13125                 | 22930             | 3.04                 | 9.2E-01                                       | BE622702.1               | EST_HUMAN                     | 601441338T1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3916184 3'                                                                                                                                                                                               |
| 5943                   | 15556                 | 25649             | 4.23                 | 9.2E-01                                       | BF037586.1               | EST_HUMAN                     | 601461153F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3864681 5'                                                                                                                                                                                               |
| 7618                   | 17469                 | 27688             | 1.38                 | 9.2E-01                                       | 6671677                  | NT                            | Mus musculus carbonic anhydrase 4 (Car4), mRNA                                                                                                                                                                                                                |
| 7990                   | 17740                 | 27983             | 3.63                 | 9.2E-01                                       | 11430963                 | NT                            | Homo sapiens lysosomal pyrase-like protein 1 (LALP1), mRNA                                                                                                                                                                                                    |
| 7952                   | 17802                 | 28041             | 1.73                 | 9.2E-01                                       | BF593251.1               | EST_HUMAN                     | 7058e06.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3578219 3' similar to SW:NU5M_TRYBB                                                                                                                                                                   |
| 8960                   | 18767                 | 29059             | 1.85                 | 9.2E-01                                       | BF132402.1               | EST_HUMAN                     | P04540 NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 5 ;                                                                                                                                                                                                               |
| 9006                   | 18809                 | 29101             | 2.01                 | 9.2E-01                                       | BF680047.1               | EST_HUMAN                     | 601820312F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4052018 5'                                                                                                                                                                                               |
| 2077                   | 11967                 |                   | 1.43                 | 9.1E-01                                       | 8923056                  | NT                            | 602154769F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4295896 5'                                                                                                                                                                                               |
| 3169                   | 13094                 | 22898             | 0.97                 | 9.1E-01                                       | T26418.1                 | EST_HUMAN                     | Homo sapiens hypothetical protein FLJ20048 (FLJ20048), mRNA                                                                                                                                                                                                   |
| 3169                   | 13094                 | 22899             | 0.97                 | 9.1E-01                                       | T26418.1                 | EST_HUMAN                     | AB200G8R Infant brain, LLNL array of Dr. M. Soares 1NIB Homo sapiens cDNA clone LLAB200G8 5'                                                                                                                                                                  |
| 4310                   | 14207                 | 23991             | 0.86                 | 9.1E-01                                       | U68172.1                 | NT                            | AB200G8R Infant brain, LLNL array of Dr. M. Soares 1NIB Homo sapiens cDNA clone LLAB200G8 5'                                                                                                                                                                  |
| 5919                   | 15824                 | 25950             | 2.92                 | 9.1E-01                                       | Q61704                   | SWISSPROT                     | Rattus norvegicus mucin (MUC2) gene, partial cds                                                                                                                                                                                                              |
| 6472                   | 16331                 | 26498             | 15.99                | 9.1E-01                                       | AA806623.1               | EST_HUMAN                     | INTER-ALPHA-TRYPsin INHIBITOR HEAVY CHAIN H3 PRECURSOR (ITI-HEAVY CHAIN H3)                                                                                                                                                                                   |
| 6551                   | 16409                 | 26587             | 2.2                  | 9.1E-01                                       | U72995.1                 | NT                            | ob71g08.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1368862 3'                                                                                                                                                                                             |
| 9445                   | 19641                 |                   | 30.05                | 9.1E-01                                       | AF050113.1               | NT                            | Rattus norvegicus Rab3 GDP/GTP exchange protein mRNA, complete cds                                                                                                                                                                                            |
| 3170                   | 13095                 | 22900             | 0.89                 | 9.0E-01                                       | 7661625                  | NT                            | Homo sapiens uncoupling protein-3 (UCP3) gene, complete cds                                                                                                                                                                                                   |
| 4282                   | 14181                 | 23959             | 2.37                 | 9.0E-01                                       | AF099810.1               | NT                            | Homo sapiens DKFZP564M2423 protein (DKFZP564M2423), mRNA                                                                                                                                                                                                      |
| 4945                   | 14822                 | 24589             | 0.82                 | 9.0E-01                                       | AF017729.1               | NT                            | Homo sapiens neuroligin III-alpha gene, partial cds                                                                                                                                                                                                           |
| 6388                   | 16250                 |                   | 1.45                 | 9.0E-01                                       | D38821.1                 | NT                            | Oryctolagus cuniculus Rad51 (RAD51) mRNA, complete cds                                                                                                                                                                                                        |
|                        |                       |                   |                      |                                               |                          |                               | Xenopus laevis gene for aldolase, complete cds                                                                                                                                                                                                                |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5494                   | 15413                 | 25476             | 2.08                 | 8.9E-01                                       | AF026198.1               | NT                            | Fugu rubripes neural cell adhesion molecule L1 homolog (L1-CAM) gene, complete cds; putative protein 1 (PUT1) gene, partial cds; mitosis-specific chromosome segregation protein SMC1 homolog (SMC1) gene, complete cds; and calcium channel alpha-1 subunit> |
| 5786                   | 15692                 |                   | 1.32                 | 8.9E-01                                       | X60986.1                 | NT                            | Rabbit MHC fragment RLA-DF DNA                                                                                                                                                                                                                                |
| 8990                   | 18794                 | 29085             | 3.47                 | 8.9E-01                                       | AE003944.1               | NT                            | Xylella fastidiosa, section 90 of 229 of the complete genome                                                                                                                                                                                                  |
| 9285                   | 18987                 |                   | 4.74                 | 8.9E-01                                       | AE002185.2               | NT                            | Chlamydia pneumoniae AR39, section 21 of 94 of the complete genome                                                                                                                                                                                            |
| 4442                   | 14336                 | 24126             | 3.28                 | 8.8E-01                                       | O26350                   | SWISSPROT                     | PUTATIVE F420-DEPENDENT NADP REDUCTASE                                                                                                                                                                                                                        |
| 8430                   | 18304                 | 28560             | 2.98                 | 8.8E-01                                       | Z28337.1                 | NT                            | M.aeruginosa (HUB 5-2-4) DNA from plasmid PMA1                                                                                                                                                                                                                |
| 9108                   | 19722                 |                   | 1.75                 | 8.8E-01                                       | D90911.1                 | NT                            | Synechocystis sp. PCC6803 complete genome, 13/27, 1576593-1719643                                                                                                                                                                                             |
| 457                    | 10401                 | 20218             | 1.54                 | 8.7E-01                                       | AF106953.2               | NT                            | Homo sapiens SOS1 (SOS1) gene, partial cds                                                                                                                                                                                                                    |
| 2353                   | 12233                 | 22130             | 1.09                 | 8.7E-01                                       | 5901893                  | NT                            | Homo sapiens AT-binding transcription factor 1 (ATBF1), mRNA                                                                                                                                                                                                  |
| 2845                   | 12773                 | 22560             | 4.64                 | 8.7E-01                                       | AA595863.1               | EST_HUMAN                     | nm05f1.1 s1 NC1_CGAP_P14.1 Homo sapiens cDNA clone IMAGE:1076877                                                                                                                                                                                              |
| 4938                   | 14816                 |                   | 2.51                 | 8.7E-01                                       | AF121970.1               | NT                            | Pseudomonas aeruginosa topoisomerase (top), putative transcriptional regulatory protein OhbR (ohbR), ortho-halobenzoate 1,2-dioxygenase beta-ISP protein OhbA (ohbA), OhbC (ohbC), ortho-halobenzoate 1,2-dioxygenase alpha-ISP protein OhbB (ohbB), and put> |
| 7613                   | 17464                 | 27681             | 1.45                 | 8.7E-01                                       | AE004963.1               | NT                            | Pseudomonas aeruginosa PAO1, section 524 of 529 of the complete genome                                                                                                                                                                                        |
| 8206                   | 18090                 | 28343             | 5.47                 | 8.7E-01                                       | BF363970.1               | EST_HUMAN                     | QV0-NN1021-100800-337-c03 NN1021 Homo sapiens cDNA                                                                                                                                                                                                            |
| 8970                   | 18776                 | 29067             | 4.16                 | 8.7E-01                                       | BF107694.1               | EST_HUMAN                     | 601823684R1 NIH_MGC_79 Homo sapiens cDNA clone IMAGE:4043564 3'                                                                                                                                                                                               |
| 8970                   | 18776                 | 29068             | 4.16                 | 8.7E-01                                       | BF107694.1               | EST_HUMAN                     | 601823684R1 NIH_MGC_79 Homo sapiens cDNA clone IMAGE:4043564 3'                                                                                                                                                                                               |
| 9488                   | 19634                 |                   | 2.78                 | 8.7E-01                                       | AV661898.1               | EST_HUMAN                     | AV661898 GLC Homo sapiens cDNA clone GLCGYG07 3'                                                                                                                                                                                                              |
| 466                    | 10409                 |                   | 1.66                 | 8.6E-01                                       | X17012.1                 | NT                            | Rat IGFI gene for insulin-like growth factor II                                                                                                                                                                                                               |
| 840                    | 10767                 | 20618             | 3.62                 | 8.6E-01                                       | W69089.1                 | EST_HUMAN                     | zd44e03.r1 Scores_fetal_heart_NBHH19W Homo sapiens cDNA clone IMAGE:343516 5'                                                                                                                                                                                 |
| 2224                   | 12109                 | 22012             | 1.01                 | 8.6E-01                                       | 4503210                  | NT                            | Homo sapiens cytochrome P450, subfamily XXVIA (steroid 27-hydroxylase, cerebrotendinous xanthomatosis), polypeptide 1 (CYP27A1b) mRNA                                                                                                                         |
| 3568                   | 13482                 | 23273             | 0.81                 | 8.6E-01                                       | AL161585.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 65                                                                                                                                                                                                 |
| 3730                   | 13642                 | 23427             | 1.29                 | 8.6E-01                                       | U49724.1                 | NT                            | Drosophila melanogaster merlin (Dmerlin) mRNA, complete cds                                                                                                                                                                                                   |
| 5595                   | 15509                 | 25586             | 11.82                | 8.6E-01                                       | X60547.1                 | NT                            | Chicken lipoprotein lipase gene                                                                                                                                                                                                                               |
| 5595                   | 15509                 | 25587             | 11.82                | 8.6E-01                                       | X60547.1                 | NT                            | Chicken lipoprotein lipase gene                                                                                                                                                                                                                               |
| 6030                   | 15934                 | 28065             | 2.14                 | 8.6E-01                                       | AF143732.1               | NT                            | Grus canadensis recombination activating protein 1 (RAG-1) gene, partial cds                                                                                                                                                                                  |
| 6030                   | 15934                 | 28066             | 2.14                 | 8.6E-01                                       | AF143732.1               | NT                            | Grus canadensis recombination activating protein 1 (RAG-1) gene, partial cds                                                                                                                                                                                  |
| 6626                   | 16506                 |                   | 1.52                 | 8.6E-01                                       | AP001518.1               | NT                            | Bacillus halodurans genomic DNA, section 12/14                                                                                                                                                                                                                |
| 6443                   | 16304                 | 28469             | 2.75                 | 8.5E-01                                       | BE542612.1               | EST_HUMAN                     | 601067107F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3453505 5'                                                                                                                                                                                               |
| 7924                   | 17774                 | 28013             | 1.36                 | 8.5E-01                                       | AB006799.1               | NT                            | Cyanidium caldarium gene for SigC, complete cds                                                                                                                                                                                                               |
| 7924                   | 17774                 | 28014             | 1.36                 | 8.5E-01                                       | AB006799.1               | NT                            | Cyanidium caldarium gene for SigC, complete cds                                                                                                                                                                                                               |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                       |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9430                   | 19643                 |                   | 2.52                 | 8.5E-01                                       | 11418543                 | NT                            | Homo sapiens human immunodeficiency virus type 1 enhancer-binding protein 1 (HIVBP1), mRNA                                                               |
| 9436                   | 19075                 |                   | 2.63                 | 8.5E-01                                       | 9507008                  | NT                            | Rattus norvegicus protein tyrosine phosphatase, non-receptor type 5 (Ptpn5), mRNA                                                                        |
| 9683                   | 19238                 | 25243             | 1.29                 | 8.5E-01                                       | AB030818.1               | NT                            | Mus musculus mper1 gene for period1, complete cds                                                                                                        |
| 4108                   | 14008                 | 23785             | 0.94                 | 8.4E-01                                       | AF143509.1               | NT                            | Mus musculus NK cell receptor 2B4 gene, promoter region and partial cds                                                                                  |
| 5378                   | 19443                 | 25145             | 2.7                  | 8.4E-01                                       | L78726.1                 | NT                            | Human fibroblast growth factor receptor 3 (FGFR3) gene, intron 7                                                                                         |
| 5378                   | 19443                 | 25146             | 2.7                  | 8.4E-01                                       | L78726.1                 | NT                            | Human fibroblast growth factor receptor 3 (FGFR3) gene, intron 7                                                                                         |
| 7721                   | 17571                 |                   | 3.13                 | 8.4E-01                                       | AJ248287.1               | NT                            | Pyrococcus abyssi complete genome; segment 5/6                                                                                                           |
| 724                    | 10656                 | 20486             | 2.31                 | 8.3E-01                                       | M93437.1                 | NT                            | Thermus thermophilus cytochrome c-552 (cycA) and CycB (cycB) genes, complete cds                                                                         |
| 3056                   | 12983                 | 22774             | 2.64                 | 8.3E-01                                       | AL161506.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 18                                                                                            |
| 3739                   | 13651                 | 23434             | 1                    | 8.3E-01                                       | AB010879.1               | NT                            | Nicotiana tabacum mRNA for chloroplast ribosomal protein L10, complete cds                                                                               |
| 3930                   | 13639                 | 23619             | 3.11                 | 8.3E-01                                       | Y19177.1                 | NT                            | Streptomyces antibioticus polyketide biosynthetic gene cluster                                                                                           |
| 4917                   | 14796                 | 24570             | 1.12                 | 8.3E-01                                       | U46916.1                 | NT                            | Canis familiaris MHC DLA Class II DRB pseudogene DRB2                                                                                                    |
| 4917                   | 14796                 | 24571             | 1.12                 | 8.3E-01                                       | U46916.1                 | NT                            | Canis familiaris MHC DLA Class II DRB pseudogene DRB2                                                                                                    |
| 5177                   | 14796                 | 24570             | 0.95                 | 8.3E-01                                       | U46916.1                 | NT                            | Canis familiaris MHC DLA Class II DRB pseudogene DRB2                                                                                                    |
| 5177                   | 14796                 | 24571             | 0.95                 | 8.3E-01                                       | U46916.1                 | NT                            | Canis familiaris MHC DLA Class II DRB pseudogene DRB2                                                                                                    |
| 5222                   | 15145                 | 24839             | 2.13                 | 8.3E-01                                       | AL161540.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 40                                                                                            |
| 7573                   | 17424                 |                   | 4.2                  | 8.3E-01                                       | A1791952.1               | EST_HUMAN                     | nm0112.y6 NCI_CGAP_Co9 Homo sapiens cDNA clone IMAGE:1076495 5' similar to contains THR.t1 THR repetitive element                                        |
| 7822                   | 17672                 | 27914             | 1.23                 | 8.3E-01                                       | AF098070.1               | NT                            | Drosophila melanogaster Lis1 homolog mRNA, complete cds                                                                                                  |
| 7867                   | 17717                 | 27962             | 3.1                  | 8.3E-01                                       | AF108133.1               | NT                            | Mus musculus neuro-d4 gene, exons 3 through 12 and partial cds                                                                                           |
| 8062                   | 17953                 | 28204             | 2.46                 | 8.3E-01                                       | AE000903.1               | NT                            | Methanobacterium thermoautotrophicum from bases 1270510 to 1283409 (section 109 of 148) of the complete genome                                           |
| 8076                   | 17967                 |                   | 2.46                 | 8.3E-01                                       | 7212472                  | NT                            | Phytophthora infestans mitochondrion, complete genome                                                                                                    |
| 8623                   | 18488                 | 28760             | 2.03                 | 8.3E-01                                       | AF020503.1               | NT                            | Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHT) gene, exon 5                                                          |
| 2006                   | 11898                 | 21789             | 2.99                 | 8.2E-01                                       | AB000489.1               | NT                            | Rattus norvegicus mRNA for RPHO-1, complete cds                                                                                                          |
| 2043                   | 11934                 |                   | 1.51                 | 8.2E-01                                       | AF145593.1               | NT                            | Mus musculus trophinin (Tnn) gene, complete cds                                                                                                          |
| 2646                   | 12513                 |                   | 1.14                 | 8.2E-01                                       | AW376990.1               | EST_HUMAN                     | IL3-CT0219-161199-031-C08 CT0219 Homo sapiens cDNA                                                                                                       |
| 5045                   | 14917                 | 24691             | 1                    | 8.2E-01                                       | AB000489.1               | NT                            | Rattus norvegicus mRNA for RPHO-1, complete cds                                                                                                          |
| 6122                   | 16016                 | 25154             | 3.26                 | 8.2E-01                                       | AW379433.1               | EST_HUMAN                     | OM4-HT0243-081199-037-e01 HT0243 Homo sapiens cDNA                                                                                                       |
| 6309                   | 19462                 | 26330             | 3.58                 | 8.2E-01                                       | Z12126.1                 | NT                            | S.cerevisiae MET, LEU4, and POL1 genes encoding MET4 protein, alpha-isopropylmalate (alpha-IPM) synthetase (partial), and DNA polymerase alpha (partial) |
| 7788                   | 17638                 | 27871             | 1.53                 | 8.2E-01                                       | AF052639.1               | NT                            | Homo sapiens thioredoxin-related protein mRNA, complete cds                                                                                              |
| 7937                   | 17787                 | 28028             | 6.66                 | 8.2E-01                                       | O9J170                   | SWISSPROT                     | MOKUSICK-KAUFMAN/BARDET-BIEDL SYNDROMES PUTATIVE CHAPERONIN                                                                                              |



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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                      |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-----------------------------------------------------------------------------------------|
| 7937                   | 17787                 | 28029             | 6.66                 | 8.2E-01                                       | Q9J170                   | SWISSPROT                     | MCKUSICK-KAUFMAN/BARDET-BIEDL SYNDROMES PUTATIVE CHAPERONIN                             |
| 8009                   | 18717                 | 23011             | 2.81                 | 8.2E-01                                       | L10127.1                 | NT                            | Molluscum contagiosum virus type 1 ORF1 and ORF2 DNA                                    |
| 8966                   | 18772                 | 23064             | 6                    | 8.2E-01                                       | P10383                   | SWISSPROT                     | OVARIAN TUMOR LOCUS PROTEIN                                                             |
| 8971                   | 18777                 | 29069             | 6.65                 | 8.2E-01                                       | H87398.1                 | EST_HUMAN                     | Yw14d02.r1 Soares placenta 8to9weeks 2NbHP8to9W Homo sapiens cDNA clone IMAGE:252195 5' |
| 9451                   | 19083                 | 25284             | 1.73                 | 8.2E-01                                       | AJ001261.1               | NT                            | similar to gb:M39072 60S RIBOSOMAL PROTEIN L7A (HUMAN);                                 |
| 2731                   | 12593                 |                   | 1.29                 | 8.1E-01                                       | AF191839.1               | NT                            | Mus musculus mRNA for NIPSNAP2 protein                                                  |
| 3412                   | 13329                 | 23130             | 2.81                 | 8.1E-01                                       | AF055086.1               | NT                            | Mus musculus TANK binding kinase TBK1 (Tbk1) mRNA, complete cds                         |
| 3412                   | 13329                 | 23131             | 2.81                 | 8.1E-01                                       | AF055086.1               | NT                            | Homo sapiens MHC class 1 region                                                         |
| 5992                   | 15897                 | 26020             | 2.49                 | 8.1E-01                                       | Q13491                   | SWISSPROT                     | Homo sapiens MHC class 1 region                                                         |
| 5992                   | 15897                 | 26021             | 2.49                 | 8.1E-01                                       | Q13491                   | SWISSPROT                     | NEURONAL MEMBRANE GLYCOPROTEIN M6-B                                                     |
| 8775                   | 18692                 | 28879             | 1.94                 | 8.1E-01                                       | BE938558.1               | SWISSPROT                     | NEURONAL MEMBRANE GLYCOPROTEIN M6-B                                                     |
| 8775                   | 18592                 | 28880             | 1.94                 | 8.1E-01                                       | BE938558.1               | EST_HUMAN                     | RC0-TN0080-220800-025-d10 TN0080 Homo sapiens cDNA                                      |
| 9166                   | 18909                 | 25343             | 1.84                 | 8.1E-01                                       | AE001711.1               | EST_HUMAN                     | RC0-TN0080-220800-025-d10 TN0080 Homo sapiens cDNA                                      |
| 170                    | 10142                 |                   | 3.02                 | 8.0E-01                                       | AJ271510.1               | NT                            | Thermotoga maritima section 23 of 136 of the complete genome                            |
| 285                    | 10250                 | 20070             | 3.76                 | 8.0E-01                                       | AJ192772.1               | NT                            | Staphylococcus aureus partial pla gene for phosphate actyltransferase allele 15         |
| 1990                   | 11884                 |                   | 1.83                 | 8.0E-01                                       | BF530982.1               | EST_HUMAN                     | Bos taurus tubb and rlf genes                                                           |
| 3039                   | 12987                 | 22761             | 2.73                 | 8.0E-01                                       | AF127897.1               | NT                            | 602072473F1 NCL CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4215091 5'                     |
| 3273                   | 13194                 | 22993             | 1.14                 | 8.0E-01                                       | AB006193.1               | NT                            | Saimiri boliviensis olfactory receptor (SBO27) gene, partial cds                        |
| 3643                   | 13557                 |                   | 1.8                  | 8.0E-01                                       | AL162788.2               | NT                            | Mus musculus gene for oviductal glycoprotein, complete cds                              |
| 4432                   | 14327                 | 24115             | 5.65                 | 8.0E-01                                       | X83739.2                 | NT                            | Neisseria meningitidis serogroup A strain Z2491 complete genome, segment 717            |
| 6661                   | 16541                 |                   | 2.84                 | 8.0E-01                                       | AW901489.1               | EST_HUMAN                     | G.gallus mRNA for nicotinic acetylcholine receptor (nAChR) beta 3 subunit               |
| 446                    | 10390                 | 20211             | 3.78                 | 7.9E-01                                       | D11476.1                 | NT                            | RC0-NN1012-270300-021-h06 NN1012 Homo sapiens cDNA                                      |
| 698                    | 10631                 |                   | 1.16                 | 7.9E-01                                       | AE002130.1               | NT                            | Lymantria dispar nuclear polyhedrosis virus gene for DNA polymerase, complete cds       |
| 1587                   | 11491                 |                   | 65.97                | 7.9E-01                                       | AB040885.1               | NT                            | Ureaplasma urealyticum section 31 of 59 of the complete genome                          |
| 1634                   | 11538                 |                   | 1.37                 | 7.9E-01                                       | U32739.1                 | NT                            | Homo sapiens mRNA for KIAA1452 protein, partial cds                                     |
| 2216                   | 12102                 | 22006             | 5.24                 | 7.9E-01                                       | AB004816.1               | NT                            | Haemophilus influenzae Rd section 54 of 163 of the complete genome                      |
| 2217                   | 12103                 | 22007             | 2.29                 | 7.9E-01                                       | AF130459.1               | NT                            | Oryctolagus cuniculus mRNA for mitogenin29, complete cds                                |
| 3472                   | 13388                 | 23193             | 2.75                 | 7.9E-01                                       | AF228664.1               | NT                            | Danio rerio Trp4-associated protein Tap1A (tap1A) mRNA, complete cds                    |
| 4204                   | 14103                 |                   | 0.92                 | 7.9E-01                                       | BE263612.1               | EST_HUMAN                     | Gallus gallus SOX8 transcription factor (SOX8) mRNA, complete cds                       |
| 4508                   | 14401                 | 24188             | 1.02                 | 7.9E-01                                       | 6763745                  | NT                            | 601192033F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3535785 5'                          |
| 4508                   | 14401                 | 24189             | 1.02                 | 7.9E-01                                       | 6763745                  | NT                            | Mus musculus embigin (Emb), mRNA                                                        |
| 5075                   | 14945                 | 24720             | 0.84                 | 7.9E-01                                       | Z47210.1                 | NT                            | Mus musculus embigin (Emb), mRNA                                                        |
| 5075                   | 14945                 | 24721             | 0.84                 | 7.9E-01                                       | Z47210.1                 | NT                            | S.pneumoniae dexB, cap3A, cap3B and cap3C genes and orfs                                |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                  |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5084                   | 14954                 |                   | 1.01                 | 7.9E-01                                       | M29930.1                 | NT                            | Human insulin receptor (allele 2) gene, exons 14, 15, 16 and 17                                                                                                                                                     |
| 6721                   | 16601                 | 26790             | 2.43                 | 7.9E-01                                       | X90996.1                 | NT                            | P. sativum GR gene                                                                                                                                                                                                  |
| 7504                   | 17373                 | 27582             | 4.78                 | 7.9E-01                                       | U01912.1                 | NT                            | Giardia lamblia variant-specific surface protein G3M-B (vspG3M-B) mRNA, partial cds                                                                                                                                 |
| 7781                   | 17631                 | 27864             | 3.95                 | 7.9E-01                                       | P19719                   | SWISSPROT                     | SMALL HYDROPHOBIC PROTEIN                                                                                                                                                                                           |
| 8372                   | 18249                 |                   | 2.36                 | 7.9E-01                                       | 766247.1                 | NT                            | Homo sapiens KIAA1072 protein (KIAA1072), mRNA                                                                                                                                                                      |
| 8543                   | 18415                 | 28682             | 2.48                 | 7.9E-01                                       | P19022                   | SWISSPROT                     | NEURAL-CADHERIN PRECURSOR (N-CADHERIN)                                                                                                                                                                              |
| 858                    | 10784                 |                   | 1.75                 | 7.8E-01                                       | Z43785.1                 | EST_HUMAN                     | HSC1KH041 normalized infant brain cDNA Homo sapiens cDNA clone c-1kh04                                                                                                                                              |
| 2229                   | 12114                 | 22016             | 3.2                  | 7.8E-01                                       | AW959567.1               | EST_HUMAN                     | EST371637 MAGI resequences, MAGI Homo sapiens cDNA                                                                                                                                                                  |
| 4603                   | 14491                 | 24278             | 0.79                 | 7.8E-01                                       | U87305.1                 | NT                            | Rattus norvegicus transmembrane receptor Unc5H1 mRNA, complete cds                                                                                                                                                  |
| 5698                   | 15607                 | 25709             | 2.32                 | 7.8E-01                                       | AF115886.1               | NT                            | Sphenodon punctatus alpha endolase mRNA, partial cds                                                                                                                                                                |
| 7323                   | 17199                 | 27399             | 1.27                 | 7.8E-01                                       | Y10159.1                 | NT                            | D. discoideum racGAP gene                                                                                                                                                                                           |
| 9424                   | 19623                 |                   | 1.42                 | 7.8E-01                                       | L29260.1                 | NT                            | Arabidopsis thaliana 1-amine-1-cyclopropanecarboxylate synthase (ACS5) gene, complete cds                                                                                                                           |
| 138                    | 10112                 | 19932             | 6.33                 | 7.7E-01                                       | AF184345.1               | NT                            | Lycopodium obscurum ADP-glucose pyrophosphorylase large subunit (AGP-L1) mRNA, complete cds                                                                                                                         |
| 709                    | 10641                 |                   |                      |                                               |                          |                               | Mus musculus major histocompatibility locus class II region: major histocompatibility protein class II alpha chain (IAalpha) and major histocompatibility protein class II beta chain (IEbeta) genes, complete cds; |
| 2680                   | 12545                 | 22436             | 1.85                 | 7.7E-01                                       | AF050157.1               | NT                            | butyrophilin-like (NG9), butyrophilin-lt>                                                                                                                                                                           |
|                        |                       |                   | 2.8                  | 7.7E-01                                       | O33915                   | SWISSPROT                     | CITRATE SYNTHASE                                                                                                                                                                                                    |
| 3313                   | 13234                 |                   | 0.8                  | 7.7E-01                                       | 8393408                  | NT                            | Homo sapiens UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 7 (GALNAC-T7) (GALNAC-T7), mRNA                                                                                       |
| 3549                   | 13464                 | 23259             | 4.45                 | 7.7E-01                                       | AF118085.1               | NT                            | Homo sapiens PRO1975 mRNA, complete cds                                                                                                                                                                             |
| 4297                   | 14195                 | 23979             | 2.88                 | 7.7E-01                                       | AF199488.1               | NT                            | Coturnix coturnix japonica sub-species japonica beta-actin mRNA, partial cds                                                                                                                                        |
| 4297                   | 14195                 | 23980             | 2.88                 | 7.7E-01                                       | AF199488.1               | NT                            | Coturnix coturnix japonica sub-species japonica beta-actin mRNA, partial cds                                                                                                                                        |
| 5415                   | 15335                 | 25386             | 1.44                 | 7.7E-01                                       | P16553                   | SWISSPROT                     | RAFFINOSE INVERTASE (INVERTASE)                                                                                                                                                                                     |
| 5415                   | 15335                 | 25387             | 1.44                 | 7.7E-01                                       | P16553                   | SWISSPROT                     | RAFFINOSE INVERTASE (INVERTASE)                                                                                                                                                                                     |
| 5626                   | 15541                 | 25630             | 1.95                 | 7.7E-01                                       | R08600.1                 | EST_HUMAN                     | yf24b02.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:127755 3'                                                                                                                                  |
| 9212                   | 10112                 | 19932             | 2.6                  | 7.7E-01                                       | AF184345.1               | NT                            | Lycopodium obscurum ADP-glucose pyrophosphorylase large subunit (AGP-L1) mRNA, complete cds                                                                                                                         |
| 9311                   | 19004                 |                   | 6.14                 | 7.7E-01                                       | 11497621                 | NT                            | Archaeoglobus fulgidus, complete genome                                                                                                                                                                             |
| 5710                   | 15618                 | 25720             | 4.04                 | 7.6E-01                                       | AF059510.1               | NT                            | Arabidopsis thaliana 3-methylcrotonyl-CoA carboxylase non-biotinylated subunit (MCCB) mRNA, complete cds                                                                                                            |
| 5710                   | 15618                 | 25721             | 4.04                 | 7.6E-01                                       | AF059510.1               | NT                            | Arabidopsis thaliana 3-methylcrotonyl-CoA carboxylase non-biotinylated subunit (MCCB) mRNA, complete cds                                                                                                            |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                   |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6999                   | 16579                 | 26770             | 1.41                 | 7.6E-01                                       | AF146793.2               | NT                            | Mus musculus neuromedin U precursor (Nmu) gene, partial cds; PHLIP (Tphlp) gene, partial cds; CLOCK (Clock) gene, complete cds; PFT27 (Pft27) gene, complete cds; and H5AR (H5ar) gene, complete cds |
| 6726                   | 16806                 | 26796             | 2.04                 | 7.6E-01                                       | 6857752                  | NT                            | Mus musculus advillin (Advil-pending), mRNA                                                                                                                                                          |
| 6726                   | 16806                 | 26797             | 2.04                 | 7.6E-01                                       | 6857752                  | NT                            | Mus musculus advillin (Advil-pending), mRNA                                                                                                                                                          |
| 7184                   | 17061                 | 27252             | 1.28                 | 7.6E-01                                       | 6753577                  | NT                            | Mus musculus cytochrome P450, 2b9, phenobarbital inducible, type a (Cyp2b9), mRNA                                                                                                                    |
| 7347                   | 17215                 | 27414             | 7.52                 | 7.6E-01                                       | P30372                   | SWISSPROT                     | MUSCARINIC ACETYLCHOLINE RECEPTOR M2                                                                                                                                                                 |
| 7347                   | 17215                 | 27415             | 7.52                 | 7.6E-01                                       | P30372                   | SWISSPROT                     | MUSCARINIC ACETYLCHOLINE RECEPTOR M2                                                                                                                                                                 |
| 8664                   | 18553                 | 28837             | 2.31                 | 7.6E-01                                       | X86347.1                 | NT                            | H. aspersa mRNA for neurofilament NF70                                                                                                                                                               |
| 8664                   | 18553                 | 28838             | 2.31                 | 7.6E-01                                       | X86347.1                 | NT                            | H. aspersa mRNA for neurofilament NF70                                                                                                                                                               |
| 8948                   | 18756                 |                   | 4.81                 | 7.6E-01                                       | AL161592.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 88                                                                                                                                        |
| 9073                   | 18850                 |                   | 2.74                 | 7.6E-01                                       | AB020702.1               | NT                            | Homo sapiens mRNA for KIAA0895 protein, partial cds                                                                                                                                                  |
| 502                    | 10444                 |                   | 1.52                 | 7.5E-01                                       | AL163301.2               | NT                            | Homo sapiens chromosome 21 segment HS21C101                                                                                                                                                          |
| 569                    | 10508                 | 20315             | 2.23                 | 7.5E-01                                       | AF020503.1               | NT                            | Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHLT) gene, exon 5                                                                                                     |
| 3315                   | 13236                 | 23040             | 0.88                 | 7.5E-01                                       | C14203.1                 | EST_HUMAN                     | C14203 Clontech human aorta polyA+ mRNA (#6572) Homo sapiens cDNA clone GEN-037E11 5'                                                                                                                |
| 4573                   | 10083                 | 19900             | 13.92                | 7.5E-01                                       | 8922672                  | NT                            | Homo sapiens hypothetical protein FLJ10793 (FLJ10793), mRNA                                                                                                                                          |
| 9381                   | 19042                 |                   | 3.57                 | 7.5E-01                                       | AF163151.2               | NT                            | Homo sapiens dentin sialophosphoprotein precursor (DSPP) gene, complete cds                                                                                                                          |
| 9828                   | 19329                 | 25209             | 1.87                 | 7.5E-01                                       | D90907.1                 | NT                            | Synechocystis sp. PCC6803 complete genome, 9/27, 1056467-1188885                                                                                                                                     |
| 9884                   | 19368                 | 25190             | 1.42                 | 7.5E-01                                       | AE000823.1               | NT                            | Methanobacterium thermoautotrophicum from bases 317350 to 328792 (section 29 of 148) of the complete genome                                                                                          |
| 1114                   | 11029                 | 20869             | 1.23                 | 7.4E-01                                       | AI598146.1               | EST_HUMAN                     | tn14509.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2167577 3' similar to contains Alu repetitive element; contains element MIR repetitive element;                                              |
| 2295                   | 12177                 | 22076             | 0.97                 | 7.4E-01                                       | AB011106.1               | NT                            | Homo sapiens mRNA for KIAA0534 protein, partial cds                                                                                                                                                  |
| 3665                   | 13579                 | 23366             | 1.22                 | 7.4E-01                                       | AF112538.1               | NT                            | Malva pusilla actin (Act1) mRNA, complete cds                                                                                                                                                        |
| 4213                   | 14111                 | 23889             | 4.43                 | 7.4E-01                                       | AL163246.2               | NT                            | Homo sapiens chromosome 21 segment HS21C046                                                                                                                                                          |
| 7258                   | 17135                 | 27328             | 7.23                 | 7.4E-01                                       | BE747503.1               | EST_HUMAN                     | 601573028F1 NIH_MGC 9 Homo sapiens cDNA clone IMAGE:3834174 5'                                                                                                                                       |
| 9041                   | 18828                 |                   | 3.28                 | 7.4E-01                                       | 6753217                  | NT                            | Mus musculus complement component 1 inhibitor (C1inh), mRNA                                                                                                                                          |
| 9150                   | 18901                 |                   | 1.59                 | 7.4E-01                                       | AI472641.1               | EST_HUMAN                     | tn1301.x1 NCI_CGAP_Lym5 Homo sapiens cDNA clone IMAGE:2043985 3'                                                                                                                                     |
| 4515                   | 14408                 | 24194             | 0.95                 | 7.3E-01                                       | AE001166.1               | NT                            | Borrelia burgdorferi (section 52 of 70) of the complete genome                                                                                                                                       |
| 4602                   | 14490                 | 24277             | 4.76                 | 7.3E-01                                       | AF225421.1               | NT                            | Homo sapiens HT017 mRNA, complete cds                                                                                                                                                                |
| 5127                   | 14994                 |                   | 1.1                  | 7.3E-01                                       | 5360211                  | NT                            | Homo sapiens growth arrest-specific 7 (GAS7), transcript variant b, mRNA                                                                                                                             |
| 5984                   | 15889                 | 26010             | 5.61                 | 7.3E-01                                       | L35772.1                 | NT                            | Mus musculus antigen (CD72) gene                                                                                                                                                                     |
| 5984                   | 15889                 | 26011             | 5.61                 | 7.3E-01                                       | L35772.1                 | NT                            | Mus musculus antigen (CD72) gene                                                                                                                                                                     |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                                                 |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6454                   | 16315                 | 26480             | 7.42                 | 7.3E-01                                       | M26511.1                 | NT                            | V.alginolyticus sucrose (scrB) gene, complete cds                                                                                                                                                                                                                  |
| 6454                   | 16315                 | 26481             | 7.42                 | 7.3E-01                                       | M26511.1                 | NT                            | V.alginolyticus sucrose (scrB) gene, complete cds                                                                                                                                                                                                                  |
| 8729                   | 18585                 | 28870             | 3.29                 | 7.3E-01                                       | AA678019.1               | EST_HUMAN                     | z125b08.s1 Soares_fetal_liver_spleen_1NFS_S1 Homo sapiens cDNA clone IMAGE:431799 3'                                                                                                                                                                               |
| 8729                   | 18585                 | 28871             | 3.29                 | 7.3E-01                                       | AA678019.1               | EST_HUMAN                     | z125b08.s1 Soares_fetal_liver_spleen_1NFS_S1 Homo sapiens cDNA clone IMAGE:431799 3'                                                                                                                                                                               |
| 814                    | 10742                 |                   | 2.54                 | 7.2E-01                                       | L29281.1                 | NT                            | Rattus norvegicus initiation factor-2 kinase (eIF-2a) mRNA, complete cds                                                                                                                                                                                           |
| 1914                   | 11809                 | 21687             | 3.68                 | 7.2E-01                                       | X79140.1                 | NT                            | N.tabacum NeIF-4A13 mRNA                                                                                                                                                                                                                                           |
| 2412                   | 12289                 | 22186             | 1.46                 | 7.2E-01                                       | AB009605.1               | NT                            | Gallus gallus gene for melanocortin 2-receptor, complete cds                                                                                                                                                                                                       |
| 3028                   | 12956                 | 22748             | 1.16                 | 7.2E-01                                       | AF198100.1               | NT                            | Fowlpox virus, complete genome                                                                                                                                                                                                                                     |
| 3406                   | 13323                 | 23124             | 2.14                 | 7.2E-01                                       | AF065606.1               | NT                            | Giardia intestinalis variant-specific surface protein (vsp417-6) gene, vsp417-6(A-I) allele, complete cds                                                                                                                                                          |
| 3795                   | 13707                 | 23494             | 1.31                 | 7.2E-01                                       | BF338350.1               | EST_HUMAN                     | 602035589F1 NCI_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4183222 5'                                                                                                                                                                                                 |
| 4660                   | 14546                 | 24335             | 2.41                 | 7.2E-01                                       | D90314.1                 | NT                            | L.mesenteroides gene for sucrose phosphorylase (EC 2.4.1.7)                                                                                                                                                                                                        |
| 5064                   | 14934                 | 24706             | 1.16                 | 7.2E-01                                       | AF196779.1               | NT                            | Homo sapiens transcription factor GHM enhancer 3, JM11 protein, JM4 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds; and L-type calcium channel $\alpha$ |
| 5064                   | 14934                 | 24707             | 1.16                 | 7.2E-01                                       | AF196779.1               | NT                            | Homo sapiens transcription factor GHM enhancer 3, JM11 protein, JM4 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds; and L-type calcium channel $\alpha$ |
| 6923                   | 16801                 | 26994             | 1.21                 | 7.2E-01                                       | AF236061.1               | NT                            | Oryctolagus cuniculus RING-finger binding protein mRNA, partial cds                                                                                                                                                                                                |
| 7922                   | 17772                 | 28011             | 2.22                 | 7.2E-01                                       | BF670081.1               | EST_HUMAN                     | 602118381F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4276381 5'                                                                                                                                                                                                    |
| 8121                   | 18009                 | 28256             | 4.78                 | 7.2E-01                                       | U82623.1                 | NT                            | Rattus norvegicus cytochrome mRNA, complete cds                                                                                                                                                                                                                    |
| 9570                   | 19160                 |                   | 4.08                 | 7.2E-01                                       | AP000093.1               | NT                            | Aeropyrum pernix genomic DNA, section 617                                                                                                                                                                                                                          |
| 677                    | 10610                 | 20431             | 10.38                | 7.1E-01                                       | D21070.1                 | NT                            | Rana catesbeiana mRNA for bullfrog skeletal muscle calcium release channel (ryanodine receptor) alpha isoform(RyR1), complete cds                                                                                                                                  |
| 3024                   | 12952                 | 22745             | 10.8                 | 7.1E-01                                       | AJ270777.1               | NT                            | Homo sapiens partial TCF-4 gene for T-cell transcription factor-4, exons 15-16                                                                                                                                                                                     |
| 4114                   | 14014                 | 23793             | 2.93                 | 7.1E-01                                       | 7305360                  | NT                            | Mus musculus otogelin (Otog), mRNA                                                                                                                                                                                                                                 |
| 4114                   | 14014                 | 23794             | 2.93                 | 7.1E-01                                       | 7305360                  | NT                            | Mus musculus otogelin (Otog), mRNA                                                                                                                                                                                                                                 |
| 5623                   | 15538                 | 25625             | 1.56                 | 7.1E-01                                       | BF681034.1               | EST_HUMAN                     | 602155438F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4296344 5'                                                                                                                                                                                                    |
| 5623                   | 15538                 | 25626             | 1.56                 | 7.1E-01                                       | BF681034.1               | EST_HUMAN                     | 602155438F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4296344 5'                                                                                                                                                                                                    |
| 6149                   | 16022                 | 26162             | 6.97                 | 7.1E-01                                       | U36232.1                 | NT                            | Drosophila melanogaster 6-pyruvoyltetrahydropterin synthase (pr) gene, complete cds                                                                                                                                                                                |
| 7669                   | 17519                 | 27746             | 2.25                 | 7.1E-01                                       | BE904405.1               | EST_HUMAN                     | 601498330F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3698495 5'                                                                                                                                                                                                    |
| 9363                   | 19550                 |                   | 1.61                 | 7.1E-01                                       | AA421492.1               | EST_HUMAN                     | zu06h11.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:731109 3'                                                                                                                                                                                               |
| 1209                   | 11118                 | 20966             | 1.04                 | 7.0E-01                                       | AB014514.1               | NT                            | Homo sapiens mRNA for KIAA0614 protein, partial cds                                                                                                                                                                                                                |
| 1209                   | 11118                 | 20967             | 1.04                 | 7.0E-01                                       | AB014514.1               | NT                            | Homo sapiens mRNA for KIAA0614 protein, partial cds                                                                                                                                                                                                                |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2399                   | 12277                 | 22173             | 1.4                  | 7.0E-01                                       | N62412.1                 | EST_HUMAN                     | yz73e07.s1 Soares_multiple_sclerosis_2NbHMSP Homo sapiens cDNA clone IMAGE:288708 3' similar to contains Alu repetitive element;                              |
| 2399                   | 12277                 | 22174             | 1.4                  | 7.0E-01                                       | N62412.1                 | EST_HUMAN                     | yz73e07.s1 Soares_multiple_sclerosis_2NbHMSP Homo sapiens cDNA clone IMAGE:288708 3' similar to contains Alu repetitive element;                              |
| 4989                   | 14864                 |                   | 1.95                 | 7.0E-01                                       | AL163301.2               | NT                            | Homo sapiens chromosome 21 segment HS21C101                                                                                                                   |
| 6880                   | 16759                 |                   | 8.1                  | 7.0E-01                                       | AE000253.1               | NT                            | Escherichia coli K-12 MG1655 section 143 of 400 of the complete genome                                                                                        |
| 8463                   | 18336                 | 28599             | 2                    | 7.0E-01                                       | AV763842.1               | EST_HUMAN                     | AV763842 MDS Homo sapiens cDNA clone MDSCH04 5'                                                                                                               |
| 8463                   | 18336                 | 28600             | 2                    | 7.0E-01                                       | AV763842.1               | EST_HUMAN                     | AV763842 MDS Homo sapiens cDNA clone MDSCH04 5'                                                                                                               |
| 954                    | 10878                 | 20725             | 15.73                | 6.9E-01                                       | U69674.1                 | NT                            | Candida albicans squalene epoxidase (CAERG1) gene, complete cds and translational regulator gene, partial cds                                                 |
| 954                    | 10878                 | 20726             | 15.73                | 6.9E-01                                       | U69674.1                 | NT                            | Candida albicans squalene epoxidase (CAERG1) gene, complete cds and translational regulator gene, partial cds                                                 |
| 1288                   | 11196                 | 21049             | 2.21                 | 6.9E-01                                       | AA593530.1               | EST_HUMAN                     | nm28a09.s1 NCL_CGAP_Gas1 Homo sapiens cDNA clone IMAGE:1085176 3'                                                                                             |
| 3182                   | 13107                 | 22911             | 1.63                 | 6.9E-01                                       | AE002271.2               | NT                            | Chlamydia muridarum, section 3 of 85 of the complete genome                                                                                                   |
| 3399                   | 13316                 | 23117             | 0.85                 | 6.9E-01                                       | Y17373.1                 | NT                            | Mus musculus mRNA for immunoglobulin gamma heavy chain variable region, isolate PC 2811                                                                       |
| 6652                   | 16532                 | 26726             | 2.73                 | 6.9E-01                                       | AL161573.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 69                                                                                                 |
| 6652                   | 16532                 | 26727             | 2.73                 | 6.9E-01                                       | AL161573.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 69                                                                                                 |
| 8582                   | 18450                 | 28719             | 3.56                 | 6.9E-01                                       | D89013.1                 | NT                            | Homo sapiens DAN gene, complete cds                                                                                                                           |
| 8582                   | 18450                 | 28720             | 3.56                 | 6.9E-01                                       | D89013.1                 | NT                            | Homo sapiens DAN gene, complete cds                                                                                                                           |
| 9016                   | 19543                 |                   | 2.37                 | 6.9E-01                                       | Q99958                   | SWISSPROT                     | FORKHEAD BOX PROTEIN C2 (FORKHEAD-RELATED PROTEIN FKHL14) (MESENCHYME FORK HEAD PROTEIN 1) (MFH-1 PROTEIN) (TRANSCRIPTION FACTOR FKHL14)                      |
| 941                    | 10866                 | 20713             | 1.03                 | 6.8E-01                                       | AF017784.1               | NT                            | Giardia intestinalis carbamate kinase gene, complete cds                                                                                                      |
| 2639                   | 12506                 |                   | 1.16                 | 6.8E-01                                       | D90917.1                 | NT                            | Synechocystis sp. PCC6803 complete genome, 27/27, 3418852-3573470                                                                                             |
| 2799                   | 11502                 | 21362             | 1.58                 | 6.8E-01                                       | AA854475.1               | EST_HUMAN                     | aj75a05.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1402256 3' similar to gb:X56411_rnat ALCOHOL DEHYDROGENASE CLASS II PI CHAIN (HUMAN); |
| 4469                   | 14363                 | 24153             | 1.26                 | 6.8E-01                                       | J00762.1                 | NT                            | Rat(hooded) prolactin gene : exon iii and flanks                                                                                                              |
| 4749                   | 14634                 | 24420             | 0.93                 | 6.8E-01                                       | 4758521                  | NT                            | Homo sapiens hevin (HEVIN) mRNA                                                                                                                               |
| 7556                   | 17407                 | 27622             | 1.52                 | 6.8E-01                                       | AB037766.1               | NT                            | Homo sapiens mRNA for KIAA1345 protein, partial cds                                                                                                           |
| 8437                   | 18311                 | 28566             | 2.34                 | 6.8E-01                                       | AJ276675.1               | NT                            | Stagonospora avenae bg11 gene for beta-glucosidase, exons 1-4                                                                                                 |
| 8437                   | 18311                 | 28567             | 2.34                 | 6.8E-01                                       | AJ276675.1               | NT                            | Stagonospora avenae bg11 gene for beta-glucosidase, exons 1-4                                                                                                 |
| 8458                   | 18331                 | 28593             | 2.59                 | 6.8E-01                                       | AF038939.1               | NT                            | Mus musculus zinc finger protein (Peg3) mRNA, complete cds                                                                                                    |
| 8458                   | 18331                 | 28594             | 2.59                 | 6.8E-01                                       | AF038939.1               | NT                            | Mus musculus zinc finger protein (Peg3) mRNA, complete cds                                                                                                    |
| 8619                   | 18485                 | 28757             | 1.79                 | 6.8E-01                                       | AF164151.1               | NT                            | Anopheles gambiae strain M2 translation initiation factor 4C (1A) (eIF-4C) mRNA, complete cds                                                                 |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                              |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 295                    | 10259                 | 20080             | 29.34                | 6.7E-01                                       | AF213884.1               | NT                            | Homo sapiens nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (NFKB1) gene, complete cds                                                                                    |
| 336                    | 10295                 | 20110             | 19.53                | 6.7E-01                                       | AF213884.1               | NT                            | Homo sapiens nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (NFKB1) gene, complete cds                                                                                    |
| 2100                   | 11989                 | 21887             | 1.57                 | 6.7E-01                                       | AA451864.1               | EST_HUMAN                     | z12g12.s1 Scores_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:786310 3' similar to contains element TAR1 repetitive element ;                                                            |
| 2120                   | 12713                 | 21908             | 3.59                 | 6.7E-01                                       | AF186073.1               | NT                            | Drosophila melanogaster Mst85C gene, complete cds; NMDMC isoform (Nmdmc) gene, complete cds, alternatively spliced; and transcription factor (Relish) gene, complete cds, alternatively spliced |
| 2966                   | 12893                 | 22692             | 3.7                  | 6.7E-01                                       | 6678580                  | NT                            | Mus musculus Wiskott-Aldrich syndrome protein (Wasp), mRNA                                                                                                                                      |
| 4350                   | 14246                 | 24032             | 0.96                 | 6.7E-01                                       | X74421.1                 | NT                            | S.tuberosus mRNA for glucose-6-phosphate dehydrogenase                                                                                                                                          |
| 4881                   | 14762                 | 24538             | 0.85                 | 6.7E-01                                       | AW079110.1               | EST_HUMAN                     | xe9512.x1 NCI CGAP Co17 Homo sapiens cDNA clone IMAGE:2574598 3'                                                                                                                                |
| 5182                   | 15046                 | 24811             | 0.89                 | 6.7E-01                                       | AJ252942.1               | NT                            | Dendrobium fimbriatum mRNA for phosphoenolpyruvate carboxylase, partial                                                                                                                         |
| 5627                   | 15542                 | 25631             | 1.62                 | 6.7E-01                                       | AE001486.1               | NT                            | Helicobacter pylori, strain J99 section 47 of 132 of the complete genome                                                                                                                        |
| 5817                   | 15723                 | 25836             | 1.42                 | 6.7E-01                                       | 9635035                  | NT                            | Galid herpesvirus 2, complete genome                                                                                                                                                            |
| 5817                   | 15723                 | 25837             | 1.42                 | 6.7E-01                                       | 9635035                  | NT                            | Galid herpesvirus 2, complete genome                                                                                                                                                            |
| 6329                   | 16192                 |                   | 3.98                 | 6.7E-01                                       | AE004606.1               | NT                            | Pseudomonas aeruginosa PA01, section 167 of 529 of the complete genome                                                                                                                          |
| 6342                   | 16205                 | 26367             | 1.46                 | 6.7E-01                                       | AE001486.1               | NT                            | Helicobacter pylori, strain J99 section 47 of 132 of the complete genome                                                                                                                        |
| 8323                   | 18200                 | 28449             | 2.23                 | 6.7E-01                                       | BF354649.1               | EST_HUMAN                     | CM3-HT0769-010600-197-c03 HT0769 Homo sapiens cDNA                                                                                                                                              |
| 8754                   | 17903                 | 28147             | 3.69                 | 6.7E-01                                       | O14357                   | SWISSPROT                     | N-ACETYLGLUCOSAMINYL-PHOSPHATIDYLINOSITOL BIOSYNTHETIC PROTEIN GP11                                                                                                                             |
| 2452                   | 12329                 | 22227             | 0.87                 | 6.6E-01                                       | AF075240.1               | NT                            | Homo sapiens SLIT1 protein (SLIT2) mRNA, partial cds                                                                                                                                            |
| 2667                   | 12532                 | 22422             | 1.29                 | 6.6E-01                                       | AF199339.1               | NT                            | Homo sapiens lens epithelium-derived growth factor gene, alternatively spliced, complete cds                                                                                                    |
| 3445                   | 13362                 | 23168             | 1.04                 | 6.6E-01                                       | 4506880                  | NT                            | Homo sapiens serpin domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A (SEMA5A) mRNA                        |
| 3608                   | 13522                 | 23310             | 3.05                 | 6.6E-01                                       | Y07669.1                 | NT                            | C.albicans random DNA marker, 282bp                                                                                                                                                             |
| 4020                   | 13924                 |                   |                      | 6.6E-01                                       | U91328.1                 | NT                            | Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (H1A-H) gene, RoRet gene, and sodium phosphate transporter (NPT3) gene, complete cds        |
| 5822                   | 15728                 | 25840             | 3.96                 | 6.6E-01                                       | 6680577                  | NT                            | Mus musculus kinesin light chain 2 (Klc2), mRNA                                                                                                                                                 |
| 6525                   | 16384                 | 26563             | 3.63                 | 6.6E-01                                       | AV660506.1               | EST_HUMAN                     | AV660506 GLC Homo sapiens cDNA clone GLCGID04 3'                                                                                                                                                |
| 7571                   | 17422                 |                   | 2.41                 | 6.6E-01                                       | AL163278.2               | NT                            | Homo sapiens chromosome 21 segment HS21C078                                                                                                                                                     |
| 9619                   | 19197                 | 25256             | 1.35                 | 6.6E-01                                       | AE004382.1               | NT                            | Vibrio cholerae chromosome II, section 39 of 93 of the complete chromosome                                                                                                                      |
| 608                    | 10544                 | 20352             | 1.37                 | 6.5E-01                                       | M75140.1                 | NT                            | H.vulgaris Na,K-ATPase alpha subunit mRNA, complete cds                                                                                                                                         |
| 608                    | 10544                 | 20353             | 1.37                 | 6.5E-01                                       | M75140.1                 | NT                            | H.vulgaris Na,K-ATPase alpha subunit mRNA, complete cds                                                                                                                                         |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3386                   | 13304                 | 23104             | 5.1                  | 6.5E-01                                       | AB041225.1               | NT                            | Mus musculus gene for Tob2, complete cds                                                                                                                                          |
| 3951                   | 13859                 | 23633             | 1.08                 | 6.5E-01                                       | 4504632                  | NT                            | Homo sapiens interleukin 10 receptor, alpha (IL10RA) mRNA                                                                                                                         |
| 4185                   | 14085                 | 23860             | 4.17                 | 6.5E-01                                       | AJ272265.1               | NT                            | Homo sapiens SPP2 gene for secreted phosphoprotein 24 precursor, exons 1-8                                                                                                        |
| 4215                   | 14113                 | 23890             | 0.86                 | 6.5E-01                                       | AL161539.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 39                                                                                                                     |
| 4994                   | 14869                 | 24632             | 2.27                 | 6.5E-01                                       | U28921.1                 | NT                            | Phaseolus vulgaris ATPase gamma subunit mRNA, nuclear gene encoding mitochondrial protein, partial cds                                                                            |
| 5175                   | 15041                 |                   | 0.88                 | 6.5E-01                                       | U37258.1                 | NT                            | Acetobacter xylinum putative ATP binding protein delta-AceB gene, partial cds, and GDP-mannose:cellobiosyl<br>diphosphopyrenol alpha-mannosyltransferase gene, complete cds       |
| 6036                   | 15939                 | 26071             | 1.38                 | 6.5E-01                                       | D88348.1                 | NT                            | Chicken mRNA for 115-kDa melanosomal matrix protein, complete cds                                                                                                                 |
| 7919                   | 17769                 | 28008             | 2                    | 6.5E-01                                       | AF119876.1               | NT                            | Mus musculus small GTP-binding protein RAB25 (Rab25) gene, complete cds                                                                                                           |
| 8030                   | 17922                 | 28168             | 3.24                 | 6.5E-01                                       | H87583.1                 | EST_HUMAN                     | yy17f06.r1 Soares_placenta_8to9weeks_2NbfHP8to9W Homo sapiens cDNA clone IMAGE:252515 5'                                                                                          |
| 8073                   | 17964                 | 28215             | 4.03                 | 6.5E-01                                       | AA601287.1               | EST_HUMAN                     | no15c07.s1 NCI_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100748 3'                                                                                                                 |
| 8170                   | 18058                 |                   | 4.27                 | 6.5E-01                                       | AU138078.1               | EST_HUMAN                     | AU138078 PLACE1 Homo sapiens cDNA clone PLACE1007810 5'                                                                                                                           |
| 8877                   | 18689                 | 28981             | 2.3                  | 6.5E-01                                       | AF014115.1               | NT                            | Plasmodium berghei cytochrome c oxidase subunit III, cytochrome c oxidase subunit I, and cytochrome b<br>genes, mitochondrial genes encoding mitochondrial proteins, complete cds |
| 9419                   | 19069                 |                   | 2.79                 | 6.5E-01                                       | BE465050.1               | EST_HUMAN                     | ht74a10.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3179130 3'                                                                                                                 |
| 9651                   | 19490                 |                   | 1.69                 | 6.5E-01                                       | Z74145.1                 | NT                            | S.cerevisiae chromosome IV reading frame ORF YDL097c                                                                                                                              |
| 252                    | 10218                 | 20035             | 5.4                  | 6.4E-01                                       | U48848.1                 | NT                            | Drosophila melanogaster 8kd dynein light chain mRNA, complete cds                                                                                                                 |
| 3410                   | 13327                 | 23128             | 2.45                 | 6.4E-01                                       | U48854.2                 | NT                            | Mus musculus dystroglycan 1 (DAG1) gene, exons 1 and 2 and complete cds                                                                                                           |
| 3785                   | 13697                 | 23484             | 1.34                 | 6.4E-01                                       | AB046827.1               | NT                            | Homo sapiens mRNA for KIAA1607 protein, partial cds                                                                                                                               |
| 4389                   | 14285                 | 24066             | 0.84                 | 6.4E-01                                       | Y12488.1                 | NT                            | M.musculus whn gene                                                                                                                                                               |
| 4389                   | 14285                 | 24067             | 0.84                 | 6.4E-01                                       | Y12488.1                 | NT                            | M.musculus whn gene                                                                                                                                                               |
| 7007                   | 18884                 | 27076             | 1.76                 | 6.4E-01                                       | AE001247.1               | NT                            | Treponema pallidum section 63 of 87 of the complete genome                                                                                                                        |
| 7807                   | 17657                 | 27895             | 13.62                | 6.4E-01                                       | U82828.1                 | NT                            | Homo sapiens ataxia telangiectasia (ATM) gene, complete cds                                                                                                                       |
| 7818                   | 17668                 | 27908             | 1.44                 | 6.4E-01                                       | BF670405.1               | EST_HUMAN                     | 602150289F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4291126 5'                                                                                                                   |
| 9528                   | 19135                 |                   | 6.34                 | 6.4E-01                                       | AV759212.1               | EST_HUMAN                     | AV759212 MDS Homo sapiens cDNA clone MDSO3C09 5'                                                                                                                                  |
| 9951                   | 19553                 |                   | 1.65                 | 6.4E-01                                       | 9845300                  | NT                            | Rat cytomegalovirus Maasricht, complete genome                                                                                                                                    |
| 427                    | 10372                 | 20196             | 4.41                 | 6.3E-01                                       | P05228                   | SWISSPROT                     | HISTIDINE-RICH PROTEIN PRECURSOR (CLONE PHRP-II)                                                                                                                                  |
| 524                    | 10466                 | 20277             | 2.15                 | 6.3E-01                                       | U32689.1                 | NT                            | Haemophilus influenzae Rd section 4 of 163 of the complete genome                                                                                                                 |
| 2116                   | 12005                 | 21903             | 3.87                 | 6.3E-01                                       | U81136.1                 | NT                            | Shigella flexneri multi-antigenic resistance locus                                                                                                                                |
| 2534                   | 12408                 | 22300             | 3.89                 | 6.3E-01                                       | U75331.1                 | NT                            | Gallus gallus bone morphogenetic protein 1 (BMP1) mRNA, partial cds                                                                                                               |
| 2534                   | 12408                 | 22301             | 3.89                 | 6.3E-01                                       | U75331.1                 | NT                            | Gallus gallus bone morphogenetic protein 1 (BMP1) mRNA, partial cds                                                                                                               |
| 2983                   | 12911                 |                   | 0.93                 | 6.3E-01                                       | Y17275.1                 | NT                            | Lycopodium obscurum p69a gene, complete CDS                                                                                                                                       |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                 |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 3995                   | 13892                 | 23668             | 1.38                 | 6.3E-01                                       | X99675.1                 | NT                            | D.melanogaster mRNA for metabotropic glutamate receptor                                                                            |
| 6959                   | 16837                 |                   | 3.17                 | 6.3E-01                                       | BE902044.1               | EST_HUMAN                     | 601678889F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3969351 5'                                                                    |
| 7150                   | 17027                 | 27223             | 1.67                 | 6.3E-01                                       | SE2927.1                 | NT                            | glycoprotein IIIa (Alu 1 and 3 fusion junction) [human, Genomic Mutant, 300 nt]                                                    |
| 7421                   | 17288                 | 27495             | 2.72                 | 6.3E-01                                       | 9627521                  | NT                            | Variola virus, complete genome                                                                                                     |
| 7421                   | 17288                 | 27496             | 2.72                 | 6.3E-01                                       | 9627521                  | NT                            | Variola virus, complete genome                                                                                                     |
| 8004                   | 17854                 | 28095             | 1.4                  | 6.3E-01                                       | AE000313.1               | NT                            | Escherichia coli K-12 MG1655 section 203 of 400 of the complete genome                                                             |
| 8413                   | 18268                 | 28543             | 2.27                 | 6.3E-01                                       | AA877715.1               | EST_HUMAN                     | HLARK.1                                                                                                                            |
| 8647                   | 18511                 | 28791             | 11.72                | 6.3E-01                                       | AI804160.1               | EST_HUMAN                     | CM-BT043-090299-046 BT043 Homo sapiens cDNA                                                                                        |
| 8725                   | 18581                 | 28865             | 1.94                 | 6.3E-01                                       | P47003                   | SWISSPROT                     | HYPOTHETICAL 13.7 KD PROTEIN IN INO1-IDS2 INTERGENIC REGION                                                                        |
| 8868                   | 18680                 | 28969             | 1.98                 | 6.3E-01                                       | P36073                   | SWISSPROT                     | HYPOTHETICAL 15.3 KD PROTEIN IN VMA12-APN1 INTERGENIC REGION                                                                       |
| 9128                   | 19697                 | 24899             | 9.21                 | 6.3E-01                                       | 9910293                  | NT                            | Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA                                                                            |
| 9220                   | 18944                 |                   | 1.54                 | 6.3E-01                                       | AF105227.1               | NT                            | Homo sapiens 3'-phosphoadenosine 5'-phosphosulfate synthetase (PAPSS) mRNA, complete cds                                           |
| 9435                   | 19619                 |                   | 1.58                 | 6.3E-01                                       | X83528.1                 | NT                            | C.lilicola pscD gene                                                                                                               |
| 5578                   | 15493                 | 25569             | 2.12                 | 6.2E-01                                       | Q10135                   | SWISSPROT                     | HYPOTHETICAL 142.5 KD PROTEIN C23E2.02 IN CHROMOSOME I                                                                             |
| 6426                   | 16287                 |                   | 3.06                 | 6.2E-01                                       | AF022283.1               | NT                            | Mus musculus calcium-sensing receptor related protein 4 (Cacr-rs4) mRNA, partial cds                                               |
| 6831                   | 16710                 | 26903             | 5.45                 | 6.2E-01                                       | H72255.1                 | EST_HUMAN                     | ys01e08.s1 Soares fetal liver spleen 1N1FLS Homo sapiens cDNA clone IMAGE:213542 3'                                                |
| 7435                   | 16448                 | 26638             | 1.71                 | 6.2E-01                                       | BE562687.1               | EST_HUMAN                     | 601336146F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3690010 5'                                                                    |
| 7476                   | 17336                 |                   | 2.66                 | 6.2E-01                                       | M24461.1                 | NT                            | Human pulmonary surfactant-associated protein SP-B (SFTP3) mRNA, complete cds                                                      |
| 7799                   | 17649                 | 27886             | 7.14                 | 6.2E-01                                       | AL161511.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 23                                                                      |
| 8007                   | 17857                 | 28099             | 5.02                 | 6.2E-01                                       | P27410                   | SWISSPROT                     | NON-STRUCTURAL POLYPROTEIN [CONTAINS: RNA-DIRECTED RNA POLYMERASE ; THIOL PROTEASE P3C ; HELICASE (2C LIKE PROTEIN); COAT PROTEIN] |
| 8007                   | 17857                 |                   | 5.02                 | 6.2E-01                                       | P27410                   | SWISSPROT                     | NON-STRUCTURAL POLYPROTEIN [CONTAINS: RNA-DIRECTED RNA POLYMERASE ; THIOL PROTEASE P3C ; HELICASE (2C LIKE PROTEIN); COAT PROTEIN] |
| 2345                   | 12225                 | 28100             | 4.5                  | 6.1E-01                                       | 6878076                  | NT                            | Mus musculus secreted acidic cysteine rich glycoprotein (Sparc), mRNA                                                              |
| 4931                   | 14809                 | 24577             | 0.99                 | 6.1E-01                                       | L20427.1                 | NT                            | Rattus norvegicus dihydroxypolyprenylbenzoate methyltransferase mRNA, complete cds                                                 |
| 4931                   | 14809                 | 24578             | 0.99                 | 6.1E-01                                       | L20427.1                 | NT                            | Rattus norvegicus dihydroxypolyprenylbenzoate methyltransferase mRNA, complete cds                                                 |
| 6104                   | 15998                 | 28134             | 3.78                 | 6.1E-01                                       | M64733.1                 | NT                            | Rat TRPM-2 gene, complete cds                                                                                                      |
| 6104                   | 15998                 | 28135             | 3.78                 | 6.1E-01                                       | M64733.1                 | NT                            | Rat TRPM-2 gene, complete cds                                                                                                      |
| 6792                   | 16671                 | 28663             | 3.72                 | 6.1E-01                                       | AF035355.1               | NT                            | Arabidopsis thaliana putative zinc transporter (ZIP1) mRNA, complete cds                                                           |
| 7108                   | 16985                 | 27175             | 1.75                 | 6.1E-01                                       | 11431065                 | NT                            | Homo sapiens mitogen-activated protein kinase kinase kinase 4 (MAP4K4), mRNA                                                       |
| 7108                   | 16985                 | 27176             | 1.75                 | 6.1E-01                                       | 11431065                 | NT                            | Homo sapiens mitogen-activated protein kinase kinase kinase 4 (MAP4K4), mRNA                                                       |
| 7419                   | 17266                 | 27492             | 19.47                | 6.1E-01                                       | AF236117.1               | NT                            | Homo sapiens G-protein coupled receptor EDG-7 mRNA, complete cds                                                                   |
| 7419                   | 17266                 | 27493             | 19.47                | 6.1E-01                                       | AF236117.1               | NT                            | Homo sapiens G-protein coupled receptor EDG-7 mRNA, complete cds                                                                   |



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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                   |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|------------------------------------------------------------------------------------------------------|
| 7778                   | 17628                 | 27860             | 1.59                 | 6.1E-01                                       | AF119117.1               | NT                            | Homo sapiens dopamine transporter (SLC6A3) gene, complete cds                                        |
| 486                    | 10429                 | 20243             | 0.92                 | 6.0E-01                                       | D87675.1                 | NT                            | Homo sapiens DNA for amyloid precursor protein, complete cds                                         |
| 549                    | 10490                 |                   | 2.64                 | 6.0E-01                                       | 5802999                  | NT                            | Homo sapiens adaptor-related protein complex 3, mu 2 subunit (CLA20), mRNA                           |
| 1339                   | 11245                 | 21103             | 1.76                 | 6.0E-01                                       | AF065253.1               | NT                            | Human respiratory syncytial virus strain CH93-53b attachment protein (G) gene, complete cds          |
| 3744                   | 13656                 | 23438             | 1.02                 | 6.0E-01                                       | AJ233396.1               | NT                            | Viral hemorrhagic septicemia virus N, P, M, G, Nv, L genes, French strain 07-71                      |
| 5227                   | 15151                 | 24918             | 1.56                 | 6.0E-01                                       | P20288                   | SWISSPROT                     | D(2) DOPAMINE RECEPTOR                                                                               |
| 5339                   | 15260                 | 25086             | 2.58                 | 6.0E-01                                       | AW139713.1               | EST_HUMAN                     | UI-H-B11-aeb-a-10-0-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2718619 3'                     |
| 5940                   | 15845                 | 25968             | 2.61                 | 6.0E-01                                       | U38813.1                 | NT                            | Musca domestica insecticide-susceptible strain voltage-sensitive sodium channel mRNA, complete cds   |
| 6350                   | 16213                 | 26375             | 6.2                  | 6.0E-01                                       | AJ277681.1               | NT                            | Homo sapiens partial LMO1 gene for LIM domain only 1 protein, exon 1                                 |
| 6725                   | 16605                 | 26794             | 4.19                 | 6.0E-01                                       | P02835                   | SWISSPROT                     | SEGMENTATION PROTEIN FUSHI TARAZU                                                                    |
| 6725                   | 16605                 | 26795             | 4.19                 | 6.0E-01                                       | P02835                   | SWISSPROT                     | SEGMENTATION PROTEIN FUSHI TARAZU                                                                    |
| 7653                   | 17503                 | 27727             | 1.69                 | 6.0E-01                                       | AB008193.1               | NT                            | Homo sapiens genes for leukotriene B4 receptor BLT2, leukotriene B4 receptor BLT1, complete cds      |
| 7894                   | 17744                 |                   | 1.43                 | 6.0E-01                                       | Q01497                   | SWISSPROT                     | PEROXISOMAL MEMBRANE PROTEIN PERO3 (PEROXIN-3)                                                       |
| 8411                   | 18286                 | 28541             | 1.78                 | 6.0E-01                                       | AJ131892.1               | NT                            | Gallus gallus mRNA for Hyperton protein, 419 kD isoform                                              |
| 8411                   | 18286                 | 28542             | 1.78                 | 6.0E-01                                       | AJ131892.1               | NT                            | Gallus gallus mRNA for Hyperton protein, 419 kD isoform                                              |
| 8838                   | 18651                 | 28939             | 2.74                 | 6.0E-01                                       | AI420623.1               | EST_HUMAN                     | tf08107.x1 NCI_CGAP_Pr28 Homo sapiens cDNA clone IMAGE:2098621 3'                                    |
| 9500                   | 19115                 | 25291             | 1.64                 | 6.0E-01                                       | 11421663                 | NT                            | Homo sapiens nuclear factor (erythroid-derived 2)-like 3 (NFE2L3), mRNA                              |
| 9787                   | 19554                 | 25065             | 2.1                  | 6.0E-01                                       | 9055303                  | NT                            | Mus musculus cGMP-inhibited phosphodiesterase (Pde3a), mRNA                                          |
| 9809                   | 19484                 |                   | 2.18                 | 6.0E-01                                       | BE157617.1               | EST_HUMAN                     | RC1-HT0375-030500-015-c03 HT0375 Homo sapiens cDNA                                                   |
| 984                    | 10907                 | 20752             | 1.25                 | 5.9E-01                                       | U32701.1                 | NT                            | Haemophilus influenzae Rd section 16 of 163 of the complete genome                                   |
| 3232                   | 13156                 | 22954             | 4.85                 | 5.9E-01                                       | AL163287.2               | NT                            | Homo sapiens chromosome 21 segment HS21C067                                                          |
| 3232                   | 13156                 | 22955             | 4.85                 | 5.9E-01                                       | AL163287.2               | NT                            | Homo sapiens chromosome 21 segment HS21C067                                                          |
| 4129                   | 14029                 |                   | 4.12                 | 5.9E-01                                       | AF162756.1               | NT                            | Rattus norvegicus cenein 2 mRNA, partial cds                                                         |
| 5889                   | 15795                 | 25917             | 2.1                  | 5.9E-01                                       | AF065440.2               | NT                            | Homo sapiens low density lipoprotein receptor-related protein II (LRP2) gene, exon 1 and partial cds |
| 8061                   | 17952                 | 28203             | 2.67                 | 5.9E-01                                       | Q9X0I3                   | SWISSPROT                     | THYMIDYLATE KINASE (TMP KINASE)                                                                      |
| 8328                   | 18205                 | 28454             | 3.1                  | 5.9E-01                                       | AW937175.1               | EST_HUMAN                     | PM1-DT0041-190100-002-h03 DT0041 Homo sapiens cDNA                                                   |
| 8629                   | 18401                 | 28669             | 2.36                 | 5.9E-01                                       | AF064626.1               | NT                            | Mus spretus strain SPRET/EI CD48 antigen (Cd48) gene, partial cds                                    |
| 9165                   | 18908                 | 25342             | 1.91                 | 5.9E-01                                       | L42320.1                 | NT                            | Oryctolagus cuniculus alpha 1 anti-trypsin (alpha 1 AT) gene, promoter region                        |
| 9404                   | 19057                 |                   | 2.18                 | 5.9E-01                                       | AB017705.1               | NT                            | Aspergillus oryzae pyrG gene for orotidine-5'-phosphate decarboxylase, complete cds                  |
| 9614                   | 19193                 |                   | 4.15                 | 5.9E-01                                       | P34926                   | SWISSPROT                     | MICROTUBULE-ASSOCIATED PROTEIN 1A [CONTAINS: MAP1 LIGHT CHAIN LC2]                                   |
| 1867                   | 11763                 | 21637             | 1.44                 | 5.8E-01                                       | P40472                   | SWISSPROT                     | SIM1 PROTEIN                                                                                         |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                          |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 3902                   | 13812                 | 23596             | 0.96                 | 5.8E-01                                       | BF695738.1               | EST_HUMAN                     | 601852474F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4076131 5'                                                                             |
| 4413                   | 14307                 | 24090             | 2.81                 | 5.8E-01                                       | AB009077.1               | NT                            | Vigna radiata mRNA for proton pyrophosphatase, complete cds                                                                                 |
| 4690                   | 14576                 |                   | 1.04                 | 5.8E-01                                       | AF110846.1               | NT                            | Megascalia scalaris sex-lethal homolog (Megsxl) gene, partial cds, alternatively spliced products                                           |
| 5753                   | 15661                 | 25768             | 1.29                 | 5.8E-01                                       | D78659.1                 | EST_HUMAN                     | HUM500E06B Human placenta polyA+ (TFujiwara) Homo sapiens cDNA clone GEN-500E06 5'                                                          |
| 6077                   | 16060                 |                   | 2.3                  | 5.8E-01                                       | S65091.1                 | NT                            | cyclic AMP-regulated phosphoprotein [rats, mRNA, 1030 nt]                                                                                   |
| 6604                   | 16484                 |                   | 2.62                 | 5.8E-01                                       | H41571.1                 | EST_HUMAN                     | yn91b03.s1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone IMAGE:175757 3' similar to gb:S78187 M-PHASE INDUCER PHOSPHATASE 2 (HUMAN); |
| 6764                   | 16643                 | 26830             | 2.23                 | 5.8E-01                                       | P14328                   | SWISSPROT                     | SPORE COAT PROTEIN SP96                                                                                                                     |
| 6764                   | 16643                 | 26831             | 2.23                 | 5.8E-01                                       | P14328                   | SWISSPROT                     | SPORE COAT PROTEIN SP96                                                                                                                     |
| 7153                   | 17030                 | 27224             | 8.64                 | 5.8E-01                                       | AJ270774.1               | NT                            | Homo sapiens partial TCF-4 gene for T-cell transcription factor-4, exons 6-11                                                               |
| 8358                   | 18235                 | 28483             | 8.47                 | 5.8E-01                                       | AJ243213.1               | NT                            | Homo sapiens partial 5-HT4 receptor gene, exons 2 to 5                                                                                      |
| 8396                   | 18272                 |                   | 3.23                 | 5.8E-01                                       | BF700092.1               | EST_HUMAN                     | 602127577F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4284403 5'                                                                             |
| 8482                   | 18355                 |                   | 1.78                 | 5.8E-01                                       | BF700092.1               | EST_HUMAN                     | 602127577F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4284403 5'                                                                             |
| 3186                   | 13111                 | 22915             | 1.48                 | 5.7E-01                                       | Q9WTJ2                   | SWISSPROT                     | PUTATIVE TRANSCRIPTION FACTOR OVO-LIKE 1 (MOV01) (MOV01A)                                                                                   |
| 3460                   | 13376                 |                   | 2.43                 | 5.7E-01                                       | AB033503.1               | NT                            | Populus euramericana peacs-2 mRNA for 1-aminocyclopropane-1-carboxylate synthase, complete cds                                              |
| 3829                   | 13741                 | 23633             | 1.65                 | 5.7E-01                                       | AF011591.1               | NT                            | Homo sapiens T cell receptor beta chain (BV6S7*2-BJ1S1) mRNA, partial cds                                                                   |
| 5201                   | 15064                 | 24827             | 2.24                 | 5.7E-01                                       | U78517.1                 | NT                            | Rattus norvegicus cAMP-regulated guanine nucleotide exchange factor II (cAMP-GEFII) mRNA, partial cds                                       |
| 5836                   | 15742                 | 25854             | 3.72                 | 5.7E-01                                       | BF035413.1               | EST_HUMAN                     | 601454962F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3856590 5'                                                                             |
| 6100                   | 15110                 | 24874             | 1.41                 | 5.7E-01                                       | AL111440.1               | NT                            | Botrytis cinerea strain T4 cDNA library under conditions of nitrogen deprivation                                                            |
| 6564                   | 16422                 | 26603             | 2.12                 | 5.7E-01                                       | P00373                   | SWISSPROT                     | PYRROLINE-5-CARBOXYLATE REDUCTASE (P5CR) (P5C REDUCTASE)                                                                                    |
| 9124                   | 18883                 |                   | 1.68                 | 5.7E-01                                       | BE715051.1               | EST_HUMAN                     | MR3-HT0736-180700-003-a02 HT0736 Homo sapiens cDNA                                                                                          |
| 3318                   | 13239                 | 23043             | 1.21                 | 5.6E-01                                       | AB018293.2               | NT                            | Homo sapiens mRNA for KIAA0740 protein, partial cds                                                                                         |
| 3318                   | 13239                 | 23044             | 1.21                 | 5.6E-01                                       | AB018293.2               | NT                            | Homo sapiens mRNA for KIAA0740 protein, partial cds                                                                                         |
| 3808                   | 13720                 | 23509             | 0.83                 | 5.6E-01                                       | AL161501.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 13                                                                               |
| 4146                   | 14046                 | 23818             | 0.83                 | 5.6E-01                                       | D83135.1                 | NT                            | Chicken TBP gene, exon8, complete cds                                                                                                       |
| 7111                   | 16888                 | 27180             | 4.16                 | 5.6E-01                                       | AV684703.1               | EST_HUMAN                     | AV684703 GKC Homo sapiens cDNA clone GKCF5F05 5'                                                                                            |
| 7111                   | 16888                 | 27181             | 4.16                 | 5.6E-01                                       | AV684703.1               | EST_HUMAN                     | AV684703 GKC Homo sapiens cDNA clone GKCF5F05 5'                                                                                            |
| 9023                   | 18817                 |                   | 2.46                 | 5.6E-01                                       | BE888280.1               | EST_HUMAN                     | 601514007F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3915457 5'                                                                             |
| 9137                   | 18893                 | 28794             | 1.73                 | 5.6E-01                                       | AA493535.1               | EST_HUMAN                     | ng75gt10.s1 NCJ_CGAP_P16 Homo sapiens cDNA clone IMAGE:940674 similar to contains element PTR7 repetitive element;                          |
| 9524                   | 19133                 |                   | 1.32                 | 5.6E-01                                       | P50505                   | SWISSPROT                     | HIGH AFFINITY POTASSIUM TRANSPORTER                                                                                                         |
| 9919                   | 19392                 |                   | 3.09                 | 5.6E-01                                       | BF573829.1               | EST_HUMAN                     | 602132029F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4271334 5'                                                                             |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                                           |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1193                   | 11103                 | 20949             | 1.09                 | 5.5E-01                                       | 8393912                  | NT                            | Rattus norvegicus Propionyl Coenzyme A carboxylase, beta polypeptide (Pccb), mRNA                                                                                                                                                                            |
| 2668                   | 12533                 | 22423             | 2.88                 | 5.5E-01                                       | P03341                   | SWISSPROT                     | GAG POLYPEPTIDE [CONTAINS: INNER COAT PROTEIN P12; CORE PROTEIN P15; CORE SHELL PROTEIN P30; NUCLEOPROTEIN P10]                                                                                                                                              |
| 2668                   | 12533                 | 22424             | 2.88                 | 5.5E-01                                       | P03341                   | SWISSPROT                     | GAG POLYPEPTIDE [CONTAINS: INNER COAT PROTEIN P12; CORE PROTEIN P15; CORE SHELL PROTEIN P30; NUCLEOPROTEIN P10]                                                                                                                                              |
| 2888                   | 12815                 | 22608             | 1.34                 | 5.5E-01                                       | 5902085                  | NT                            | Homo sapiens superkiller viralicidic activity 2 (S. cerevisiae homolog)-like (SKIV2L), mRNA                                                                                                                                                                  |
| 3027                   | 12955                 |                   | 1.39                 | 5.5E-01                                       | J46219.1                 | EST_HUMAN                     | yo18a10.s1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone IMAGE:178266 3'                                                                                                                                                                              |
| 3196                   | 13121                 | 22926             | 3.1                  | 5.5E-01                                       | AF227240.1               | NT                            | Rabbit oral papillomavirus, complete genome                                                                                                                                                                                                                  |
| 3634                   | 13548                 | 23335             | 1.29                 | 5.5E-01                                       | P48755                   | SWISSPROT                     | FOS-RELATED ANTIGEN-1                                                                                                                                                                                                                                        |
| 139                    | 10113                 | 19933             | 3.74                 | 5.4E-01                                       | 7657266                  | NT                            | Homo sapiens KIAA0929 protein Mx2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA                                                                                                                                                                 |
| 139                    | 10113                 | 19934             | 3.74                 | 5.4E-01                                       | 7657266                  | NT                            | Homo sapiens KIAA0929 protein Mx2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA                                                                                                                                                                 |
| 570                    | 10509                 | 20316             | 2.61                 | 5.4E-01                                       | AF232006.1               | NT                            | Pseudomonas syringae pv. tomato strain DC3000 AvrE (avrE), HrpW (hrpW), and Gsta (gsta) genes, complete cds; and unknown genes                                                                                                                               |
| 570                    | 10509                 | 20317             | 2.61                 | 5.4E-01                                       | AF232006.1               | NT                            | Pseudomonas syringae pv. tomato strain DC3000 AvrE (avrE), HrpW (hrpW), and Gsta (gsta) genes, complete cds; and unknown genes                                                                                                                               |
| 1250                   | 11157                 | 21006             | 2.24                 | 5.4E-01                                       | AW86087.1                | EST_HUMAN                     | QV4-NN0040-070400-160-c04 NN0040 Homo sapiens cDNA                                                                                                                                                                                                           |
| 2059                   | 11949                 |                   | 2.78                 | 5.4E-01                                       | AE002247.2               | NT                            | Chlamydomonas reinhardtii AR39, section 74 of 94 of the complete genome                                                                                                                                                                                      |
| 2208                   | 12095                 | 21998             | 2.23                 | 5.4E-01                                       | AJ276682.1               | NT                            | Drosophila melanogaster mRNA for 15,15' beta carotene dioxygenase (beta-diox gene)                                                                                                                                                                           |
| 7738                   | 17588                 |                   | 2.01                 | 5.4E-01                                       | BF572536.1               | EST_HUMAN                     | 602076545F1 NIH_MGC 62 Homo sapiens cDNA clone IMAGE:4243690 5'                                                                                                                                                                                              |
| 8427                   | 18301                 | 28557             | 2.87                 | 5.4E-01                                       | P36858                   | SWISSPROT                     | NITRATE REDUCTASE [NADPH] (NR)                                                                                                                                                                                                                               |
| 8892                   | 18702                 | 28996             | 4.51                 | 5.4E-01                                       | Q60675                   | SWISSPROT                     | LAMININ ALPHA-2 CHAIN PRECURSOR (LAMININ M CHAIN) (MEROSIN HEAVY CHAIN)                                                                                                                                                                                      |
| 8892                   | 18702                 | 28997             | 4.51                 | 5.4E-01                                       | Q60675                   | SWISSPROT                     | LAMININ ALPHA-2 CHAIN PRECURSOR (LAMININ M CHAIN) (MEROSIN HEAVY CHAIN)                                                                                                                                                                                      |
| 9087                   | 18862                 |                   | 2.12                 | 5.4E-01                                       | A1858398.1               | EST_HUMAN                     | w37g04.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:2427126 3' similar to gb:M13452 LAMIN A (HUMAN);                                                                                                                                                        |
| 505                    | 10447                 | 20260             | 2.02                 | 5.3E-01                                       | AF019413.1               | NT                            | Homo sapiens HLA class III region containing tenascin X (tenascin-X) gene, partial cds; cytochrome P450 21-hydroxylase (CYP21B), complement component C4 (C4B) G11, helicase (SK12W), RD, complement factor B (Bf), and complement component C2 (C2) genes.2 |
| 2093                   | 11982                 | 21877             | 0.91                 | 5.3E-01                                       | AF113919.1               | NT                            | Brassica oleracea var. capitata phospholipase D2 (PLD2) gene, complete cds                                                                                                                                                                                   |
| 2093                   | 11982                 | 21878             | 0.91                 | 5.3E-01                                       | AF113919.1               | NT                            | Brassica oleracea var. capitata phospholipase D2 (PLD2) gene, complete cds                                                                                                                                                                                   |
| 2755                   | 12617                 | 22508             | 8.24                 | 5.3E-01                                       | 4506328                  | NT                            | Homo sapiens protein tyrosine phosphatase, receptor-type, zeta polypeptide 1 (PTPRZ1) mRNA                                                                                                                                                                   |
| 2755                   | 12617                 | 22509             | 8.24                 | 5.3E-01                                       | 4506328                  | NT                            | Homo sapiens protein tyrosine phosphatase, receptor-type, zeta polypeptide 1 (PTPRZ1) mRNA                                                                                                                                                                   |
| 3205                   | 13129                 | 22931             | 2.92                 | 5.3E-01                                       | AF087658.1               | NT                            | Homo sapiens secreted C-type lectin precursor (SLC), gene, complete cds                                                                                                                                                                                      |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4117                   | 14017                 |                   | 1.29                 | 5.3E-01                                       | U39687.1                 | NT                            | Myoplasma genitalium section 9 of 51 of the complete genome                                                                                                                                                                                                   |
| 5350                   | 15270                 | 25098             | 1.75                 | 5.3E-01                                       | AI820921.1               | EST_HUMAN                     | zu42h12.y6 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:740711 5'                                                                                                                                                                                   |
| 5350                   | 15270                 | 25099             | 1.75                 | 5.3E-01                                       | AI820921.1               | EST_HUMAN                     | zu42h12.y6 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:740711 5'                                                                                                                                                                                   |
| 5467                   | 15387                 | 25447             | 1.91                 | 5.3E-01                                       | BE645620.1               | EST_HUMAN                     | 7e73c12.x1 NCL CGAP_P128 Homo sapiens cDNA clone IMAGE:3288118 3' similar to gb.J02783                                                                                                                                                                        |
| 5467                   | 15387                 | 25448             | 1.91                 | 5.3E-01                                       | BE645620.1               | EST_HUMAN                     | 7e73c12.x1 NCL CGAP_P128 Homo sapiens cDNA clone IMAGE:3288118 3' similar to gb.J02783                                                                                                                                                                        |
| 7161                   | 17038                 |                   | 2.15                 | 5.3E-01                                       | L01950.2                 | NT                            | PROTEIN DISULFIDE ISOMERASE PRECURSOR (HUMAN);                                                                                                                                                                                                                |
| 8846                   | 18658                 | 28946             | 5.62                 | 5.3E-01                                       | BE566291.1               | EST_HUMAN                     | Roridula gorgonias ribulose 1,5-bisphosphate carboxylase (rbcl) gene, partial cds; chloroplast gene for chloroplast product                                                                                                                                   |
| 9015                   | 19551                 |                   | 2.46                 | 5.3E-01                                       | AA916053.1               | EST_HUMAN                     | 601333867F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3682168 5'                                                                                                                                                                                               |
| 799                    | 10728                 | 20568             | 11.31                | 5.2E-01                                       | L20770.1                 | NT                            | og30e05.s1 NCL CGAP_Br7 Homo sapiens cDNA clone IMAGE:1441376 3' similar to gb.J02611                                                                                                                                                                         |
| 1148                   | 11061                 | 20904             | 7.69                 | 5.2E-01                                       | Q9WV30                   | SWISSPROT                     | APOLIPOPROTEIN D PRECURSOR (HUMAN);                                                                                                                                                                                                                           |
| 1174                   | 11086                 | 20930             | 2.83                 | 5.2E-01                                       | AF224492.1               | NT                            | Drosophila melanogaster helix-loop-helix mRNA, complete cds                                                                                                                                                                                                   |
| 1843                   | 11739                 |                   | 5.04                 | 5.2E-01                                       | AL163285.2               | NT                            | NUCLEAR FACTOR OF ACTIVATED T CELLS 5 (T CELL TRANSCRIPTION FACTOR NFAT5) (NF-A15)                                                                                                                                                                            |
| 2099                   | 11988                 | 21886             | 2.75                 | 5.2E-01                                       | AB018283.2               | NT                            | (REL DOMAIN-CONTAINING TRANSCRIPTION FACTOR NFAT5)                                                                                                                                                                                                            |
| 3081                   | 13008                 | 22798             | 1.9                  | 5.2E-01                                       | U65942.1                 | NT                            | Homo sapiens phospholipid scramblase 1 gene, complete cds                                                                                                                                                                                                     |
| 3199                   | 13124                 |                   | 1.22                 | 5.2E-01                                       | D73443.1                 | NT                            | Homo sapiens chromosome 21 segment HS21C085                                                                                                                                                                                                                   |
| 3359                   | 13278                 |                   | 1.76                 | 5.2E-01                                       | AL116780.1               | NT                            | Homo sapiens mRNA for KIAA0740 protein, partial cds                                                                                                                                                                                                           |
| 3397                   | 13314                 | 23114             | 1.9                  | 5.2E-01                                       | AA984165.1               | EST_HUMAN                     | Chlamydia abortus strain S26/3 POMp91A and POMp90A precursor, genes, complete cds                                                                                                                                                                             |
| 3560                   | 13494                 |                   | 1.13                 | 5.2E-01                                       | AF020299.1               | NT                            | Azotobacter vinelandii lcd gene for isocitrate dehydrogenase, complete cds                                                                                                                                                                                    |
| 3582                   | 13496                 | 23287             | 1.06                 | 5.2E-01                                       | U82671.2                 | NT                            | Botrytis cinerea strain T4 cDNA library under conditions of nitrogen deprivation                                                                                                                                                                              |
| 4949                   | 14826                 |                   | 1.29                 | 5.2E-01                                       | 7106444                  | NT                            | am77g05.s1 Stralagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1616504 3'                                                                                                                                                                               |
| 7761                   | 17611                 | 27837             | 1.28                 | 5.2E-01                                       | AF143952.2               | NT                            | Medicago sativa chloroplast malate dehydrogenase precursor (p1mdh) mRNA, nuclear gene encoding chloroplast protein, complete cds                                                                                                                              |
| 9719                   | 19260                 | 25221             | 2.46                 | 5.2E-01                                       | AW137066.1               | EST_HUMAN                     | Homo sapiens chromosome Xq28 melanoma antigen family A2a (MAGEA2A), melanoma antigen family A12 (MAGEA12), melanoma antigen family A2b (MAGEA2B), melanoma antigen family A3 (MAGEA3), caltractin (CALT), NAD(P)H dehydrogenase-like protein (NSDHL), and LI> |
| 9887                   | 19370                 |                   | 3.43                 | 5.2E-01                                       | P18516                   | SWISSPROT                     | Mus musculus vanilloid receptor-like protein 1 (Vr1), mRNA                                                                                                                                                                                                    |
| 601                    | 10537                 | 20347             | 1.89                 | 5.1E-01                                       | M58509.1                 | NT                            | Homo sapiens PELOTA (PELOTA) gene, complete cds                                                                                                                                                                                                               |
| 632                    | 10569                 | 20381             | 3.28                 | 5.1E-01                                       | AJ233944.1               | NT                            | UI-H-B1-acp-a-08-0-J1.s1 NCL CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2714799 3'                                                                                                                                                                               |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 632                    | 10569                 | 20382             | 3.28                 | 5.1E-01                                       | AJ233944.1               | NT                            | Polyomium vitellinum (strain PI vt1) 16S rRNA gene                                                                                                                                                                                                            |
| 1632                   | 11536                 |                   | 1.06                 | 5.1E-01                                       | X87885.1                 | NT                            | R.norvegicus mRNA for mammalian fusca protein                                                                                                                                                                                                                 |
| 1977                   | 11870                 |                   | 1.44                 | 5.1E-01                                       | BF683095.1               | EST_HUMAN                     | 602139319F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4298117 5'                                                                                                                                                                                               |
| 3984                   | 13891                 | 23667             | 3.84                 | 5.1E-01                                       | AI858495.1               | EST_HUMAN                     | w39b12.x1 NCI_CGAP_U1 Homo sapiens cDNA clone IMAGE:2427283 3'                                                                                                                                                                                                |
| 4094                   | 13994                 | 23771             | 2.86                 | 5.1E-01                                       | F96380                   | SWISSPROT                     | TRANSCRIPTION-REPAIR COUPLING FACTOR (TRCF)                                                                                                                                                                                                                   |
| 6133                   | 15980                 | 26116             | 1.57                 | 5.1E-01                                       | R80873.1                 | EST_HUMAN                     | y94a09.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:146872 3'                                                                                                                                                                                       |
| 7584                   | 17435                 | 27650             | 4.54                 | 5.1E-01                                       | J05412.1                 | NT                            | Human regenerating protein (reg) gene, complete cds                                                                                                                                                                                                           |
| 7586                   | 17437                 | 27663             | 3.57                 | 5.1E-01                                       | W22302.1                 | EST_HUMAN                     | 65B1 Human retina cDNA Tsp509I-cleaved sublibrary Homo sapiens cDNA not directional                                                                                                                                                                           |
| 9230                   | 19478                 |                   | 3.62                 | 5.1E-01                                       | BF030207.1               | EST_HUMAN                     | 601558683F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:3826767 5'                                                                                                                                                                                               |
| 9473                   | 19100                 |                   | 2.03                 | 5.1E-01                                       | BF439982.1               | EST_HUMAN                     | nac51f10.x1 NCI_CGAP_Bm23 Homo sapiens cDNA clone IMAGE:3406218 3' similar to contains element                                                                                                                                                                |
| 2087                   | 11977                 | 21871             | 1.37                 | 5.0E-01                                       | 4885552                  | NT                            | TAR1 repetitive element;                                                                                                                                                                                                                                      |
| 2087                   | 11977                 | 21872             | 1.37                 | 5.0E-01                                       | 4885552                  | NT                            | Homo sapiens postmitotic segregation increased 2-like 9 (PMS2L9), mRNA                                                                                                                                                                                        |
|                        |                       |                   |                      |                                               |                          |                               | Homo sapiens postmitotic segregation increased 2-like 9 (PMS2L9), mRNA                                                                                                                                                                                        |
| 2097                   | 11986                 | 21882             | 1.32                 | 5.0E-01                                       | AF008210.1               | NT                            | Buchnera aphidicola genomic fragment containing (chaperone Hsp60) groEL, DNA biosynthesis initiating protein (dnaA), ATP operon (atpCDGAHFEB), and putative chromosome replication protein (gidA) genes, complete cds; and termination factor Rho (rho) gene> |
| 2097                   | 11986                 | 21883             | 1.32                 | 5.0E-01                                       | AF008210.1               | NT                            | Buchnera aphidicola genomic fragment containing (chaperone Hsp60) groEL, DNA biosynthesis initiating protein (dnaA), ATP operon (atpCDGAHFEB), and putative chromosome replication protein (gidA) genes, complete cds; and termination factor Rho (rho) gene> |
| 3688                   | 13601                 | 23388             | 0.84                 | 5.0E-01                                       | U55574.1                 | NT                            | Mus musculus anti-DNA immunoglobulin light chain IgM mRNA, antibody 363p.138, partial cds                                                                                                                                                                     |
| 3797                   | 13709                 | 23495             | 3.44                 | 5.0E-01                                       | AB033010.1               | NT                            | Homo sapiens mRNA for KIAA1184 protein, partial cds                                                                                                                                                                                                           |
| 6961                   | 16839                 |                   | 5.62                 | 5.0E-01                                       | M92304.1                 | NT                            | Xenopus laevis smooth muscle beta-tropomyosin mRNA, complete cds                                                                                                                                                                                              |
| 7442                   | 16455                 | 26644             | 3.61                 | 5.0E-01                                       | BF317212.1               | EST_HUMAN                     | 601903871F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4136632 5'                                                                                                                                                                                               |
| 7550                   | 17401                 | 27614             | 2.25                 | 5.0E-01                                       | P35573                   | SWISSPROT                     | GLYCOGEN DEBRANCHING ENZYME (GLYCOGEN DEBRANCHER) [INCLUDES: 4-ALPHA-GLUCANOTRANSFERASE (OLIGO-1,4-1,4-GLUCANTRANSFERASE); AMYLO-1,6-GLUCOSIDASE (DEXTRIN 6-ALPHA-D-GLUCOSIDASE)]                                                                             |
| 7550                   | 17401                 | 27615             | 2.25                 | 5.0E-01                                       | P35573                   | SWISSPROT                     | GLYCOGEN DEBRANCHING ENZYME (GLYCOGEN DEBRANCHER) [INCLUDES: 4-ALPHA-GLUCANOTRANSFERASE (OLIGO-1,4-1,4-GLUCANTRANSFERASE); AMYLO-1,6-GLUCOSIDASE (DEXTRIN 6-ALPHA-D-GLUCOSIDASE)]                                                                             |
| 7941                   | 17791                 |                   | 1.27                 | 5.0E-01                                       | BE869218.1               | EST_HUMAN                     | 601445024F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3849436 5'                                                                                                                                                                                               |
| 9003                   | 18806                 | 29099             | 9.32                 | 5.0E-01                                       | AB021490.2               | NT                            | Oryzias latipes gene for membrane guanylyl cyclase OIGC1, complete cds                                                                                                                                                                                        |
| 9170                   | 18913                 |                   | 2.26                 | 5.0E-01                                       | AF029215.1               | NT                            | Mus musculus MRC OX-2 antigen homolog gene, exons 2-5, and complete cds                                                                                                                                                                                       |
| 9858                   | 19349                 |                   | 2.02                 | 5.0E-01                                       | AL163302.2               | NT                            | Homo sapiens chromosome 21 segment HS21C102                                                                                                                                                                                                                   |
| 9869                   | 19358                 |                   | 2.94                 | 5.0E-01                                       | OT13951                  | SWISSPROT                     | NUCLEAR ENVELOPE PROTEIN CUT11                                                                                                                                                                                                                                |

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Table 4  
Single Exon Probes Expressed in Heart

| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 772                    | 10702                 | 20541             | 1.98                 | 4.9E-01                                       | BF571492.1               | EST_HUMAN                     | 602076649F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4243860 5'                                                               |
| 1864                   | 11760                 | 21634             | 1.39                 | 4.9E-01                                       | U40869.1                 | NT                            | Cavia porcellus pulmonary surfactant protein A (SP-a) mRNA, complete cds                                                      |
| 5679                   | 15588                 | 25688             | 2.46                 | 4.9E-01                                       | AF020931.1               | NT                            | Homo sapiens diacylglycerol kinase 3 (DAGK3) gene, exon 10                                                                    |
| 5679                   | 15588                 | 25689             | 2.46                 | 4.9E-01                                       | AF020931.1               | NT                            | Homo sapiens diacylglycerol kinase 3 (DAGK3) gene, exon 10                                                                    |
| 6406                   | 16267                 | 26429             | 1.76                 | 4.9E-01                                       | AB040051.1               | NT                            | Oryza sativa subsp. japonica mEF-G mRNA for mitochondrial elongation factor G, complete cds                                   |
| 7197                   | 17074                 |                   | 1.41                 | 4.9E-01                                       | BF209791.1               | EST_HUMAN                     | 601674964F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4102503 5'                                                               |
| 7359                   | 19768                 |                   | 2.2                  | 4.9E-01                                       | 10946863                 | NT                            | Mus musculus unc13 homolog (C. elegans) 1 (Unc13h1), mRNA                                                                     |
| 9065                   | 18346                 |                   | 1.43                 | 4.9E-01                                       | AF176912.1               | NT                            | Homo sapiens neurotrophin-1/ $\beta$ -cell stimulating factor-3 gene, complete cds                                            |
| 9851                   | 19733                 |                   | 3.55                 | 4.9E-01                                       | AA613562.1               | EST_HUMAN                     | mq22e11.s1 NCL_CGAP_Co10 Homo sapiens cDNA clone IMAGE:1144652 3'                                                             |
| 4577                   | 14136                 |                   | 1.12                 | 4.8E-01                                       | 4504850                  | NT                            | Homo sapiens potassium channel, subfamily K, member 5 (TASK-2) (KCNK5) mRNA, and translated products                          |
| 5381                   | 15300                 | 25153             | 8.94                 | 4.8E-01                                       | J02987.1                 | NT                            | Saccharomyces cerevisiae sporulation protein (SPO11) gene required for meiotic recombination, complete cds                    |
| 6018                   | 15922                 |                   | 3.94                 | 4.8E-01                                       | AA659878.1               | EST_HUMAN                     | nu85f09.s1 NCL_CGAP_Alv1 Homo sapiens cDNA clone IMAGE:1217513                                                                |
| 6330                   | 16193                 |                   | 1.96                 | 4.8E-01                                       | 5031650                  | NT                            | Homo sapiens reproduction 8 (D8S2298E) mRNA                                                                                   |
| 6563                   | 16421                 | 26601             | 3.82                 | 4.8E-01                                       | AL161492.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 4                                                                  |
| 6563                   | 16421                 | 26602             | 3.82                 | 4.8E-01                                       | AL161492.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 4                                                                  |
| 6613                   | 16493                 | 26679             | 1.16                 | 4.8E-01                                       | AI820744.1               | EST_HUMAN                     | y77f10.y5 Soares breast 2NbrHBst Homo sapiens cDNA clone IMAGE:154795 5' similar to contains element MER6 repetitive element; |
| 8111                   | 18001                 |                   | 2.04                 | 4.8E-01                                       | X83502.1                 | NT                            | S. cerevisiae ORFs from chromosome X                                                                                          |
| 9369                   | 19511                 |                   | 2.52                 | 4.8E-01                                       | AF227565.1               | NT                            | Trypanosoma cruzi transposon VIP II SIRE repeat region                                                                        |
| 9870                   | 19359                 |                   | 2.26                 | 4.8E-01                                       | BE790632.1               | EST_HUMAN                     | 601584324F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3938909 5'                                                                |
| 5925                   | 15830                 | 25953             | 8.36                 | 4.7E-01                                       | BF217173.1               | EST_HUMAN                     | 601883880F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4096387 5'                                                               |
| 8221                   | 18103                 |                   | 5.77                 | 4.7E-01                                       | AF102673.1               | NT                            | Influenza A virus isolate hk51697 hemagglutinin (HA) gene, partial cds                                                        |
| 8434                   | 18308                 | 25564             | 2.06                 | 4.7E-01                                       | U41069.1                 | NT                            | Human collagen alpha2(X) (COL11A2) gene, exons 6 through 16, and partial cds                                                  |
| 8682                   | 18570                 | 28853             | 2.43                 | 4.7E-01                                       | AW889448.1               | EST_HUMAN                     | RC6-NT0029-240400-011-E08 NT0029 Homo sapiens cDNA                                                                            |
| 9390                   | 19049                 |                   | 1.36                 | 4.7E-01                                       | AW341561.1               | EST_HUMAN                     | hcd11c08.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2909198 3'                                                      |
| 3674                   | 13588                 | 23375             | 1.27                 | 4.6E-01                                       | AW818638.1               | EST_HUMAN                     | RC1-ST0278-040400-018-b06 ST0278 Homo sapiens cDNA                                                                            |
| 3683                   | 13597                 | 23383             | 1.28                 | 4.6E-01                                       | BF693300.1               | EST_HUMAN                     | 602081103F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4245481 5'                                                               |
| 3683                   | 13597                 | 23384             | 1.28                 | 4.6E-01                                       | BF693300.1               | EST_HUMAN                     | 602081103F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4245481 5'                                                               |
| 5087                   | 14957                 |                   | 0.97                 | 4.6E-01                                       | MF11267.1                | NT                            | Bovine steroid 21-hydroxylase gene (P-450-c21) gene, complete cds                                                             |
| 5360                   | 15280                 | 25111             | 3.38                 | 4.6E-01                                       | Q90643                   | SWISSPROT                     | INTERFERON REGULATORY FACTOR 3 (IRF-3)                                                                                        |
| 5360                   | 15280                 | 25112             | 3.38                 | 4.6E-01                                       | Q90643                   | SWISSPROT                     | INTERFERON REGULATORY FACTOR 3 (IRF-3)                                                                                        |
| 5404                   | 15323                 | 25372             | 1.78                 | 4.6E-01                                       | BE734781.1               | EST_HUMAN                     | 601568755F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3943637 5'                                                               |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 5414                   | 15334                 | 25384             | 3.29                 | 4.6E-01                                       | A1247679.1               | EST_HUMAN                     | qh59h02.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1849011 3' similar to TR:O15338 O15338 BUTYROPHILIN.; |
| 5414                   | 15334                 | 25385             | 3.29                 | 4.6E-01                                       | A1247679.1               | EST_HUMAN                     | qh59h02.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1849011 3' similar to TR:O15338 O15338 BUTYROPHILIN.; |
| 5418                   | 15339                 | 25393             | 1.58                 | 4.6E-01                                       | P20050                   | SWISSPROT                     | MEIOSIS SPECIFIC PROTEIN HOP1                                                                                                     |
| 6057                   | 16040                 | 26181             | 1.47                 | 4.6E-01                                       | U62332.1                 | NT                            | Emricella nidulans NEMPA (nempA) gene, mitochondrial gene encoding putative mitochondrial protein, complete cds                   |
| 6057                   | 16040                 | 26182             | 1.47                 | 4.6E-01                                       | U62332.1                 | NT                            | Emricella nidulans NEMPA (nempA) gene, mitochondrial gene encoding putative mitochondrial protein, complete cds                   |
| 6843                   | 16722                 | 26916             | 13.48                | 4.6E-01                                       | BF697399.1               | EST_HUMAN                     | 602130953F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4287828 5'                                                                   |
| 7363                   | 17230                 | 27430             | 26.48                | 4.6E-01                                       | P55202                   | SWISSPROT                     | ATRIAL NATRIURETIC PEPTIDE RECEPTOR B PRECURSOR (ANP-B) (ANPRB) (GC-B) (GUANYLATE CYCLASE)                                        |
| 7363                   | 17230                 | 27431             | 26.48                | 4.6E-01                                       | P55202                   | SWISSPROT                     | ATRIAL NATRIURETIC PEPTIDE RECEPTOR B PRECURSOR (ANP-B) (ANPRB) (GC-B) (GUANYLATE CYCLASE)                                        |
| 7730                   | 17580                 | 27802             | 1.33                 | 4.6E-01                                       | A1915634.1               | EST_HUMAN                     | wg73e12.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2370766 3'                                                   |
| 7730                   | 17580                 | 27803             | 1.33                 | 4.6E-01                                       | A1915634.1               | EST_HUMAN                     | wg73e12.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2370766 3'                                                   |
| 8359                   | 18236                 |                   | 2.86                 | 4.6E-01                                       | P68163                   | SWISSPROT                     | PUTATIVE VITELLOGENIN RECEPTOR PRECURSOR (YL)                                                                                     |
| 8368                   | 18245                 | 28495             | 4.78                 | 4.6E-01                                       | BE185449.1               | EST_HUMAN                     | IL5-HT0730-100500-075-g05 HT0730 Homo sapiens cDNA                                                                                |
| 8368                   | 18245                 | 28496             | 4.78                 | 4.6E-01                                       | BE185449.1               | EST_HUMAN                     | IL5-HT0730-100500-075-g05 HT0730 Homo sapiens cDNA                                                                                |
| 8766                   | 17915                 | 28160             | 5.45                 | 4.6E-01                                       | AF019369.1               | NT                            | Human thiopurine methyltransferase (TPMT) gene, exon 10 and complete cds                                                          |
| 8766                   | 17915                 | 28161             | 5.45                 | 4.6E-01                                       | AF019369.1               | NT                            | Human thiopurine methyltransferase (TPMT) gene, exon 10 and complete cds                                                          |
| 9313                   | 19005                 |                   | 1.43                 | 4.6E-01                                       | D53316.1                 | EST_HUMAN                     | HUM105F03B Clontech human fetal brain polyA+ mRNA (#6535) Homo sapiens cDNA clone GEN-105F03 5'                                   |
| 9978                   | 19491                 |                   | 2.21                 | 4.6E-01                                       | AF120134.1               | NT                            | Linanthus jamaicensis maturase (matK) gene, chloroplast gene encoding chloroplast protein, partial cds                            |
| 1869                   | 11765                 | 21639             | 1.73                 | 4.5E-01                                       | AE001931.1               | NT                            | Deinococcus radiodurans R1 section 68 of 229 of the complete chromosome 1                                                         |
| 1869                   | 11765                 | 21640             | 1.73                 | 4.5E-01                                       | AE001931.1               | NT                            | Deinococcus radiodurans R1 section 88 of 229 of the complete chromosome 1                                                         |
| 2841                   | 12769                 | 22558             | 4.87                 | 4.5E-01                                       | AA677086.1               | EST_HUMAN                     | zf55402.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:454179 3'                                             |
| 3275                   | 13196                 | 22996             | 3.97                 | 4.5E-01                                       | Q05793                   | SWISSPROT                     | BASEMENT MEMBRANE-SPECIFIC HEPARAN SULFATE PROTEOGLYCAN CORE PROTEIN                                                              |
| 3331                   | 13251                 | 23056             | 1.05                 | 4.5E-01                                       | AF126378.1               | NT                            | PRECURSOR (HSPG) (PERLECAN) (PLC)                                                                                                 |
| 3942                   | 13850                 |                   | 1.41                 | 4.5E-01                                       | Q28247                   | SWISSPROT                     | Mus musculus DNA polymerase epsilon catalytic subunit (Pole) gene, exons 2 through 12                                             |
| 3982                   | 13889                 | 23665             | 1.1                  | 4.5E-01                                       | A1708908.1               | EST_HUMAN                     | COLLAGEN ALPHA 5(IV) CHAIN                                                                                                        |
| 4085                   | 15079                 |                   | 4.02                 | 4.5E-01                                       | AW873495.1               | EST_HUMAN                     | as96e09.x1 Barslead aorta HPLR56 Homo sapiens cDNA clone IMAGE:2355480 3'                                                         |
|                        |                       |                   |                      |                                               |                          |                               | hc60g02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:3041810 3'                                                           |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                             |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|------------------------------------------------------------------------------------------------|
| 4862                   | 14742                 | 24522             | 0.94                 | 4.5E-01                                       | BE963445.2               | EST_HUMAN                     | 601657225R1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3866023 3'                                |
| 5406                   | 15325                 | 25375             | 1.45                 | 4.5E-01                                       | AW608814.1               | EST_HUMAN                     | QV2-P10012-140100-031-c09 PT0012 Homo sapiens cDNA                                             |
| 5983                   | 15888                 |                   | 1.47                 | 4.5E-01                                       | Q00956                   | SWISSPROT                     | COAT PROTEIN                                                                                   |
| 6488                   | 16346                 | 26515             | 2.49                 | 4.5E-01                                       | AI858849.1               | EST_HUMAN                     | w32e02.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2426618 3' similar to TR:Q92923 Q92923    |
| 6897                   | 16776                 | 26970             | 3.14                 | 4.5E-01                                       | AI648596.1               | EST_HUMAN                     | SWISNIF COMPLEX 170 KDA SUBUNIT. ;                                                             |
| 7100                   | 16977                 |                   | 1.54                 | 4.5E-01                                       | 11444786                 | NT                            | t256g1.x1 NCI_CGAP_Ov65 Homo sapiens cDNA clone IMAGE:2292644 3'                               |
| 7991                   | 17841                 | 28082             | 25.09                | 4.5E-01                                       | M86006.1                 | EST_HUMAN                     | Homo sapiens hypothetical protein DKFZp547G183 (DKFZp547G183), mRNA                            |
| 7991                   | 17841                 | 28083             | 25.09                | 4.5E-01                                       | M86006.1                 | EST_HUMAN                     | EST02531 Fetal brain, Striatum (cat#936206) Homo sapiens cDNA clone HFBY17                     |
| 8237                   | 18117                 | 28369             | 2.42                 | 4.5E-01                                       | AW591271.1               | EST_HUMAN                     | EST02531 Fetal brain, Striatum (cat#936206) Homo sapiens cDNA clone HFBY17                     |
| 9036                   | 19724                 |                   | 2.25                 | 4.5E-01                                       | BE871461.1               | EST_HUMAN                     | xc14h01.x1 NCI_CGAP_U18 Homo sapiens cDNA clone IMAGE:2703985 3' similar to SW:INT6_MOUSE      |
| 9694                   | 19245                 |                   | 1.44                 | 4.5E-01                                       | BF337531.1               | EST_HUMAN                     | Q64252 VIRAL INTEGRATION SITE PROTEIN INT-6, [1];                                              |
| 9763                   | 19283                 |                   | 2.15                 | 4.5E-01                                       | 11422099                 | NT                            | 601449201F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3852961 5'                                |
| 9974                   | 19652                 | 24987             | 1.83                 | 4.5E-01                                       | AF238234.2               | NT                            | 602036275F1 NCI_CGAP_Brn64 Homo sapiens cDNA clone IMAGE:4183290 5'                            |
| 1991                   | 11885                 |                   | 2.47                 | 4.4E-01                                       | 6680503                  | NT                            | Homo sapiens testis-specific kinase 2 (TESK2), mRNA                                            |
| 2340                   | 12220                 | 22118             | 3.59                 | 4.4E-01                                       | P49765                   | SWISSPROT                     | Entamoeba histolytica diaphanous protein (dia) gene, partial cds                               |
| 3274                   | 13195                 | 22994             | 0.99                 | 4.4E-01                                       | AF058790.1               | NT                            | Mus musculus integral membrane-associated protein 1 (Itmap1), mRNA                             |
| 3274                   | 13195                 | 22995             | 0.99                 | 4.4E-01                                       | AF058790.1               | NT                            | VASCULAR ENDOTHELIAL GROWTH FACTOR B PRECURSOR (VEGF-B) (VEGF RELATED FACTOR)                  |
| 3277                   | 13198                 | 22998             | 1.87                 | 4.4E-01                                       | BF056726.1               | EST_HUMAN                     | Rattus norvegicus SynGAP-b mRNA, complete cds                                                  |
| 4141                   | 14041                 |                   | 1.33                 | 4.4E-01                                       | BE378707.1               | EST_HUMAN                     | Rattus norvegicus SynGAP-b mRNA, complete cds                                                  |
| 4924                   | 14803                 |                   | 0.93                 | 4.4E-01                                       | BE141396.1               | EST_HUMAN                     | 791d02.y1 NCI_CGAP_Br16 Homo sapiens cDNA clone IMAGE:3393795 5'                               |
| 5326                   | 15246                 | 25050             | 1.99                 | 4.4E-01                                       | P04929                   | SWISSPROT                     | 601237139F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3609393 5'                                |
| 5326                   | 15246                 | 25051             | 1.99                 | 4.4E-01                                       | P04929                   | SWISSPROT                     | MR0-HT0078-131299-007-g05 HT0078 Homo sapiens cDNA                                             |
| 5490                   | 15409                 | 25474             | 1.3                  | 4.4E-01                                       | S05019.1                 | NT                            | HISTIDINE-RICH GLYCOPROTEIN PRECURSOR                                                          |
| 5499                   | 15418                 | 25481             | 1.98                 | 4.4E-01                                       | AV720408.1               | EST_HUMAN                     | HISTIDINE-RICH GLYCOPROTEIN PRECURSOR                                                          |
| 5624                   | 15539                 | 25627             | 1.6                  | 4.4E-01                                       | AI198413.1               | EST_HUMAN                     | mucin [rats, Sprague-Dawley, sulfur-dioxide-treated tracheal epithelium, mRNA Partial, 390 nt] |
| 5624                   | 15539                 | 25628             | 1.6                  | 4.4E-01                                       | AI198413.1               | EST_HUMAN                     | AV720408 GLC Homo sapiens cDNA clone GLCCSC12 5'                                               |
| 5782                   | 15688                 | 25798             | 1.79                 | 4.4E-01                                       | AW080795.1               | EST_HUMAN                     | q162h11.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:1861125 3' similar to TR:Q29168 Q29168 |
| 6592                   | 16462                 |                   | 10.84                | 4.4E-01                                       | Z11679.1                 | NT                            | UNKNOWN PROTEIN ;                                                                              |
|                        |                       |                   |                      |                                               |                          |                               | q162h11.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:1861125 3' similar to TR:Q29168 Q29168 |
|                        |                       |                   |                      |                                               |                          |                               | UNKNOWN PROTEIN ;                                                                              |
|                        |                       |                   |                      |                                               |                          |                               | xc27e08.x1 NCI_CGAP_Co18 Homo sapiens cDNA clone IMAGE:2885510 3' similar to TR:Q95154 Q95154  |
|                        |                       |                   |                      |                                               |                          |                               | AFLATOXIN B1-ALDEHYDE REDUCTASE. ;                                                             |
|                        |                       |                   |                      |                                               |                          |                               | S.tuberosum mRNA for induced stolon tip protein (partial)                                      |



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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                         |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 7354                   | 17222                 | 27422             | 1.29                 | 4.4E-01                                       | O62836                   | SWISSPROT                     | ZINC FINGER X-CHROMOSOMAL PROTEIN                                                                                                          |
| 7723                   | 17573                 | 27798             | 1.98                 | 4.4E-01                                       | AI268650.1               | EST_HUMAN                     | gc39f09.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1910921 3'                                                                           |
| 7724                   | 17574                 |                   | 2.45                 | 4.4E-01                                       | P28922                   | SWISSPROT                     | GLYCOPROTEIN B PRECURSOR (GLYCOPROTEIN 14)                                                                                                 |
| 7813                   | 17663                 | 27903             | 4.67                 | 4.4E-01                                       | P35590                   | SWISSPROT                     | TYROSINE-PROTEIN KINASE RECEPTOR TIE-1 PRECURSOR                                                                                           |
| 7935                   | 17785                 | 28025             | 1.33                 | 4.4E-01                                       | S76404.1                 | NT                            | beta-HKA=H,K-ATPase beta-subunit [rats, Genomic, 8983 nt, segment 2 of 2]                                                                  |
| 7935                   | 17785                 | 28026             | 1.33                 | 4.4E-01                                       | S76404.1                 | NT                            | beta-HKA=H,K-ATPase beta-subunit [rats, Genomic, 8983 nt, segment 2 of 2]                                                                  |
| 9296                   | 18996                 | 25329             | 2.29                 | 4.4E-01                                       | 6677874                  | NT                            | Mus musculus sodium channel, type X, alpha polypeptide (Scn10a), mRNA                                                                      |
| 9306                   | 19663                 |                   | 3.29                 | 4.4E-01                                       | AL183282.2               | NT                            | Homo sapiens chromosome 21 segment HS21C082                                                                                                |
| 9731                   | 19267                 | 25224             | 5.34                 | 4.4E-01                                       | 9627742                  | NT                            | Autographa californica nucleopolyhedrovirus, complete genome                                                                               |
| 9824                   | 19326                 |                   | 1.75                 | 4.4E-01                                       | P54725                   | SWISSPROT                     | UV EXCISION REPAIR PROTEIN PROTEIN RAD23 HOMOLOG A (HHR23A)                                                                                |
| 405                    | 10351                 | 20178             | 1.98                 | 4.3E-01                                       | AF155218.1               | NT                            | Callithrix jacchus MW/LW opsin gene, upstream flanking region                                                                              |
| 405                    | 10351                 | 20179             | 1.98                 | 4.3E-01                                       | AF155218.1               | NT                            | Callithrix jacchus MW/LW opsin gene, upstream flanking region                                                                              |
| 1585                   | 11489                 | 21350             | 1.1                  | 4.3E-01                                       | AW866550.1               | EST_HUMAN                     | QV4-SN0024-200400-183-b01 SN0024 Homo sapiens cDNA                                                                                         |
| 2843                   | 12771                 |                   | 0.96                 | 4.3E-01                                       | AW935269.1               | EST_HUMAN                     | CM2-DT0003-010200-077-c01 DT0003 Homo sapiens cDNA                                                                                         |
| 3022                   | 12950                 | 22742             | 0.93                 | 4.3E-01                                       | AW999477.1               | EST_HUMAN                     | MR0-BN0070-270300-008-g04 BN0070 Homo sapiens cDNA                                                                                         |
| 3221                   | 13145                 |                   | 1.53                 | 4.3E-01                                       | AE000698.1               | NT                            | Aquifex aeolicus section 30 of 109 of the complete genome                                                                                  |
| 4059                   | 13961                 | 23737             | 1.15                 | 4.3E-01                                       | J00306.1                 | NT                            | Human somatostatin I gene and flanks                                                                                                       |
| 4306                   | 10351                 | 20178             | 1.02                 | 4.3E-01                                       | AF155218.1               | NT                            | Callithrix jacchus MW/LW opsin gene, upstream flanking region                                                                              |
| 4306                   | 10351                 | 20179             | 1.02                 | 4.3E-01                                       | AF155218.1               | NT                            | Callithrix jacchus MW/LW opsin gene, upstream flanking region                                                                              |
| 4875                   | 14755                 |                   | 1.11                 | 4.3E-01                                       | AL161502.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 14                                                                              |
| 5059                   | 14929                 |                   | 1.06                 | 4.3E-01                                       | 9635250                  | NT                            | Xestia c-nigrum granulovirus, complete genome                                                                                              |
| 5600                   | 15514                 | 25592             | 3.04                 | 4.3E-01                                       | AF179825.1               | NT                            | Saimiri sciureus olfactory receptor (SSC186) gene, partial cds                                                                             |
| 6029                   | 15933                 | 26064             | 3.86                 | 4.3E-01                                       | AJ001678.1               | NT                            | Coturnix coturnix japonica IfnG gene                                                                                                       |
| 6102                   | 15996                 |                   | 4.01                 | 4.3E-01                                       | O33367                   | SWISSPROT                     | DNA GYRASE SUBUNIT B                                                                                                                       |
| 6393                   | 16255                 |                   | 2.54                 | 4.3E-01                                       | BF3480001.1              | EST_HUMAN                     | 602023134F1 NCI_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4158296 5'                                                                         |
| 6909                   | 16787                 |                   | 2.83                 | 4.3E-01                                       | U97040.1                 | NT                            | Methanococcus voltae flagella-related protein C-1 (flaC-fla) genes, complete cds                                                           |
| 7608                   | 17459                 | 27674             | 1.65                 | 4.3E-01                                       | AW630048.1               | EST_HUMAN                     | hh74e10.y1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2968554 5'                                                                           |
| 7608                   | 17459                 | 27675             | 1.65                 | 4.3E-01                                       | AW630048.1               | EST_HUMAN                     | hh74e10.y1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2968554 5'                                                                           |
| 7872                   | 17722                 | 27967             | 1.27                 | 4.3E-01                                       | AW170559.1               | EST_HUMAN                     | xn63e05.x1 Soares_NHCeC_cervical_tumor Homo sapiens cDNA clone IMAGE:2698400 3' similar to TR:000189 000189 MU-ADAPTIN-RELATED PROTEIN 2.; |
| 8302                   | 16049                 | 26195             | 2.64                 | 4.3E-01                                       | AF075629.1               | NT                            | Equus caballus microsatellite LEX027                                                                                                       |
| 8537                   | 18409                 | 28673             | 1.98                 | 4.3E-01                                       | AW993658.1               | EST_HUMAN                     | RC3-BN0034-290200-013-c12 BN0034 Homo sapiens cDNA                                                                                         |
| 8537                   | 18409                 | 28674             | 1.98                 | 4.3E-01                                       | AW993658.1               | EST_HUMAN                     | RC3-BN0034-290200-013-c12 BN0034 Homo sapiens cDNA                                                                                         |
| 9916                   | 19390                 |                   | 2.02                 | 4.3E-01                                       | AJ003022.1               | NT                            | Streptomyces coelicolor whiH gene                                                                                                          |

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Table 4  
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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                  |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1335                   | 12691                 | 21099             | 1.04                 | 4.2E-01                                       | Q39102                   | SWISSPROT                     | CELL DIVISION PROTEIN FTSH HOMOLOG PRECURSOR                                                                                                        |
| 1904                   | 11800                 |                   | 0.89                 | 4.2E-01                                       | AA761663.1               | EST_HUMAN                     | nz24a09.s1 NC1_CGAP_G0B1 Homo sapiens cDNA clone IMAGE:1288696 3'                                                                                   |
| 3558                   | 13472                 | 23263             | 4.78                 | 4.2E-01                                       | AE003947.1               | NT                            | Xylella fastidiosa, section 93 of 229 of the complete genome                                                                                        |
| 3585                   | 13499                 | 23288             | 1.09                 | 4.2E-01                                       | AI280338.1               | EST_HUMAN                     | qj94b01.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1879945 3'                                                                                 |
| 3803                   | 13715                 | 23503             | 0.96                 | 4.2E-01                                       | AW835927.1               | EST_HUMAN                     | QV0-L T0015-180200-127-h01 LT0015 Homo sapiens cDNA                                                                                                 |
| 3900                   | 13810                 | 23595             | 1                    | 4.2E-01                                       | Q04886                   | SWISSPROT                     | SOX-8 PROTEIN                                                                                                                                       |
| 4545                   | 14438                 |                   | 3.63                 | 4.2E-01                                       | BE073574.1               | EST_HUMAN                     | RC05-BT0559-020300-013-E06 BT0559 Homo sapiens cDNA                                                                                                 |
| 4599                   | 14487                 | 24273             | 4.96                 | 4.2E-01                                       | AA534093.1               | EST_HUMAN                     | ni99h01.s1 NC1_CGAP_P10 Homo sapiens cDNA clone IMAGE:997777 similar to gb:M33600 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DR-1 BETA CHAIN (HUMAN); |
| 4671                   | 14557                 | 24350             | 3.13                 | 4.2E-01                                       | RI3467.1                 | EST_HUMAN                     | y77e01.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:28278 5'                                                                           |
| 5503                   | 15422                 | 25484             | 1.5                  | 4.2E-01                                       | BF242055.1               | EST_HUMAN                     | 601879721F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4108493 5'                                                                                     |
| 5533                   | 15450                 | 25518             | 1.56                 | 4.2E-01                                       | AW854162.1               | EST_HUMAN                     | RC3-C T0254-060400-029-g04 CT0254 Homo sapiens cDNA                                                                                                 |
| 6151                   | 16024                 | 26164             | 9.1                  | 4.2E-01                                       | AU159472.1               | EST_HUMAN                     | AU158472 PLACE2 Homo sapiens cDNA clone PLACE2000470 3'                                                                                             |
| 6151                   | 16024                 | 26165             | 9.1                  | 4.2E-01                                       | AU159472.1               | EST_HUMAN                     | AU158472 PLACE2 Homo sapiens cDNA clone PLACE2000470 3'                                                                                             |
| 6184                   | 19461                 | 26219             | 2.1                  | 4.2E-01                                       | S82504.1                 | NT                            | Brcal1-breast cancer gene [rats, WF, spleen, Genomic, 419 nt, segment 2 of 2]                                                                       |
| 6217                   | 16083                 | 26233             | 5.91                 | 4.2E-01                                       | AL161547.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 47                                                                                       |
| 6663                   | 16543                 | 26739             | 2.1                  | 4.2E-01                                       | AW957448.1               | EST_HUMAN                     | EST369413 MAGE resequences, MAGE Homo sapiens cDNA                                                                                                  |
| 6663                   | 16543                 | 26740             | 2.1                  | 4.2E-01                                       | AW957448.1               | EST_HUMAN                     | EST369413 MAGE resequences, MAGE Homo sapiens cDNA                                                                                                  |
| 6776                   | 16655                 | 26844             | 1.19                 | 4.2E-01                                       | 4758039                  | NT                            | Homo sapiens cytochrome c oxidase subunit Vc (COX6C), nuclear gene encoding mitochondrial protein, mRNA                                             |
| 7992                   | 17842                 | 28084             | 1.48                 | 4.2E-01                                       | AW863666.1               | EST_HUMAN                     | MR3-SN0010-280300-103-h07 SN0010 Homo sapiens cDNA                                                                                                  |
| 8400                   | 18276                 | 28528             | 2.2                  | 4.2E-01                                       | AB023489.1               | NT                            | Oryzias latipes OIGC7 mRNA for membrane guanylyl cyclase, complete cds                                                                              |
| 8699                   | 18517                 | 28799             | 2.04                 | 4.2E-01                                       | BE966495.2               | EST_HUMAN                     | 601660352R1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3906085 3'                                                                                     |
| 9863                   | 19333                 |                   | 1.66                 | 4.2E-01                                       | AV731815.1               | EST_HUMAN                     | AV731815 HTF Homo sapiens cDNA clone HTFBHH05 5'                                                                                                    |
| 1078                   | 10994                 | 20835             | 1.88                 | 4.1E-01                                       | AI905481.1               | EST_HUMAN                     | RC-BT091-210199-142 BT091 Homo sapiens cDNA                                                                                                         |
| 1087                   | 11003                 | 20844             | 2.4                  | 4.1E-01                                       | AV705243.1               | EST_HUMAN                     | AV705243 ADB Homo sapiens cDNA clone ADBAHF08 5'                                                                                                    |
| 1087                   | 11003                 | 20845             | 2.4                  | 4.1E-01                                       | AV705243.1               | EST_HUMAN                     | AV705243 ADB Homo sapiens cDNA clone ADBAHF08 5'                                                                                                    |
| 1592                   | 11496                 | 21356             | 1.03                 | 4.1E-01                                       | AI905949.1               | EST_HUMAN                     | PM-BT103-270499-684 BT103 Homo sapiens cDNA                                                                                                         |
| 2678                   | 12543                 | 22434             | 1.52                 | 4.1E-01                                       | 7705283                  | NT                            | Homo sapiens anaphase-promoting complex subunit 7 (APC7), mRNA                                                                                      |
| 2910                   | 12836                 | 22633             | 1.76                 | 4.1E-01                                       | AL161536.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 36                                                                                       |
| 2910                   | 12836                 | 22634             | 1.76                 | 4.1E-01                                       | AL161536.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 36                                                                                       |
| 3263                   | 13186                 | 22985             | 1.13                 | 4.1E-01                                       | AA906344.1               | EST_HUMAN                     | qj94b08.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1505943 3'                                                                             |
| 4177                   | 14077                 | 23852             | 2.59                 | 4.1E-01                                       | AJ249207.1               | NT                            | Rhodococcus sp. AD45 isoG, isoH, isoI, isoJ, isoA, isoB, isoC, isoD, isoE and isoF genes                                                            |
| 4208                   | 14107                 |                   | 1.07                 | 4.1E-01                                       | AA909257.1               | EST_HUMAN                     | om33a02.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1542819 3'                                                                             |

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Table 4  
Single Exon Probes Expressed in Heart

| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                          |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4373                   | 14269                 |                   | 0.83                 | 4.1E-01                                       | R41726.1                 | EST_HUMAN                     | yg11b03.s1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:31814.3'                                                                                                                                  |
| 4567                   | 14459                 | 24247             | 1.26                 | 4.1E-01                                       | AV747880.1               | EST_HUMAN                     | AV747880 NPC Homo sapiens cDNA clone NPCBDF10 5'                                                                                                                                                            |
| 5185                   | 15049                 |                   | 0.87                 | 4.1E-01                                       | Z99124.1                 | NT                            | Bacillus subtilis complete genome (section 21 of 21): from 3999281 to 4214814                                                                                                                               |
| 5644                   | 15557                 | 25650             | 4.13                 | 4.1E-01                                       | BF681393.1               | EST_HUMAN                     | 602156590F1 NIH_MGC 83 Homo sapiens cDNA clone IMAGE:4297319 5'                                                                                                                                             |
| 6395                   | 16257                 | 29418             | 2.91                 | 4.1E-01                                       | U67635.1                 | NT                            | Methanococcus jannaschii section 77 of 150 of the complete genome                                                                                                                                           |
| 6683                   | 16563                 | 26757             | 1.3                  | 4.1E-01                                       | BF574604.1               | EST_HUMAN                     | 602133261F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4288238 5'                                                                                                                                             |
| 7253                   | 17130                 | 27323             | 1.23                 | 4.1E-01                                       | 6755521                  | NT                            | Mus musculus signaling intermediate in Toll pathway-evolutionarily conserved (Sitbec-pending), mRNA                                                                                                         |
| 7888                   | 17738                 |                   | 1.3                  | 4.1E-01                                       | AL139076.2               | NT                            | Campylobacter jejuni NCTC11168 complete genome; segment 3/6                                                                                                                                                 |
| 8018                   | 17868                 |                   | 1.58                 | 4.1E-01                                       | BF349382.1               | EST_HUMAN                     | CM2-HT0137-200999-010-e08 HT0137 Homo sapiens cDNA                                                                                                                                                          |
| 8213                   | 18097                 | 28349             | 1.64                 | 4.1E-01                                       | X58700.1                 | NT                            | Zea mays ZmPMS2 gene for 19 kDa zein protein                                                                                                                                                                |
| 8696                   | 17880                 | 28121             | 2.79                 | 4.1E-01                                       | Q09470                   | SWISSPROT                     | VOLTAGE-GATED POTASSIUM CHANNEL PROTEIN KV1.1 (HUK1) (HBK1)                                                                                                                                                 |
| 9624                   | 19702                 |                   | 1.72                 | 4.1E-01                                       | D87675.1                 | NT                            | Homo sapiens DNA for amyloid precursor protein, complete cds                                                                                                                                                |
| 1023                   | 10940                 | 20783             | 1.27                 | 4.0E-01                                       | 8404636                  | NT                            | Laqueus rubellus mitochondrion, complete genome                                                                                                                                                             |
| 1316                   | 11223                 | 21079             | 0.96                 | 4.0E-01                                       | AF203478.1               | NT                            | Drosophila melanogaster Dalmation (dmt) mRNA, complete cds                                                                                                                                                  |
| 1469                   | 11374                 | 21742             | 4.06                 | 4.0E-01                                       | 6679258                  | NT                            | Mus musculus platelet derived growth factor receptor, beta polypeptide (Pdgfrb), mRNA                                                                                                                       |
| 1680                   | 12709                 | 21742             | 1.17                 | 4.0E-01                                       | Z96933.1                 | NT                            | Ascrobolus immersus masc2 gene                                                                                                                                                                              |
| 1960                   | 12709                 | 21743             | 1.17                 | 4.0E-01                                       | Z96933.1                 | NT                            | Ascrobolus immersus masc2 gene                                                                                                                                                                              |
| 2774                   | 10110                 | 19931             | 1.09                 | 4.0E-01                                       | 6678490                  | NT                            | Mus musculus ubiquitin-protein ligase e3 componen n-recogin (Ubr1), mRNA                                                                                                                                    |
| 2939                   | 12868                 | 22665             | 2.24                 | 4.0E-01                                       | AL163280.2               | NT                            | Homo sapiens chromosome 21 segment HS21C080                                                                                                                                                                 |
| 2939                   | 12866                 | 22666             | 2.24                 | 4.0E-01                                       | AL163280.2               | NT                            | Homo sapiens chromosome 21 segment HS21C080                                                                                                                                                                 |
|                        |                       |                   |                      |                                               |                          |                               | Streptococcus pneumoniae Y1C (y1C), Y1D (y1D), penicillin-binding protein 2x (pbp2x), and undecaprenyl-phosphate-UDP-MurNAc-pentapeptide phospho-MurNAc-pentapeptide transferase (mraY) genes, complete cds |
| 3637                   | 13551                 | 23339             | 1.61                 | 4.0E-01                                       | AF066903.1               | NT                            | Ovis aries partial JD2 gene for T cell receptor delta chain (TCRDJ2), exon 1                                                                                                                                |
| 3755                   | 13668                 | 23451             | 3.24                 | 4.0E-01                                       | AJ277511.1               | NT                            | Ovis aries partial JD2 gene for T cell receptor delta chain (TCRDJ2), exon 1                                                                                                                                |
| 3755                   | 13668                 | 23452             | 3.24                 | 4.0E-01                                       | AJ277511.1               | NT                            | NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN 5, CHLOROPLAST                                                                                                                                                      |
| 4712                   | 14598                 |                   | 7.34                 | 4.0E-01                                       | Q31849                   | SWISSPROT                     | EST382691 MAGE resequences, MAGK Homo sapiens cDNA                                                                                                                                                          |
| 5603                   | 15517                 | 25596             | 1.31                 | 4.0E-01                                       | AW970610.1               | EST_HUMAN                     | Synechocystis sp. PCC 9413 transposase gene, complete cds                                                                                                                                                   |
| 8959                   | 18766                 |                   | 3.24                 | 4.0E-01                                       | L76080.1                 | NT                            | Homo sapiens chromosome 21 segment HS21C100                                                                                                                                                                 |
| 9312                   | 19557                 |                   | 2.22                 | 4.0E-01                                       | AL163300.2               | NT                            | HYPOTHETICAL 49.7 KD PROTEIN IN GIN2-STE3 INTERGENIC REGION                                                                                                                                                 |
| 9825                   | 19327                 |                   | 1.33                 | 4.0E-01                                       | P36049                   | SWISSPROT                     | Campylobacter jejuni NCTC11168 complete genome; segment 2/6                                                                                                                                                 |
| 9910                   | 19387                 |                   | 1.4                  | 4.0E-01                                       | AL139075.2               | NT                            | CM4-HT0136-150999-014-f09 HT0136 Homo sapiens cDNA                                                                                                                                                          |
| 227                    | 10196                 | 20007             | 1.59                 | 3.9E-01                                       | AW352188.1               | EST_HUMAN                     | Gorilla gorilla carboxyl-ester lipase (OEL) gene, complete cds                                                                                                                                              |
| 1356                   | 11262                 | 21119             | 2.1                  | 3.9E-01                                       | AF208618.1               | NT                            |                                                                                                                                                                                                             |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                    |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2605                   | 12473                 | 22367             | 3.54                 | 3.9E-01                                       | AB03019.1                | NT                            | Homo sapiens mRNA for KIAA1193 protein, partial cds                                                                                                                                   |
| 2673                   | 12538                 | 22427             | 5.98                 | 3.9E-01                                       | X82032.1                 | NT                            | Hi sapiens B-myb gene                                                                                                                                                                 |
| 2673                   | 12538                 | 22428             | 5.98                 | 3.9E-01                                       | X82032.1                 | NT                            | Hi sapiens B-myb gene                                                                                                                                                                 |
| 3058                   | 12985                 | 22776             | 3.63                 | 3.9E-01                                       | AJ255896.1               | NT                            | Sinorhizobium meliloti egf, syrB2, cys3 genes and orf3                                                                                                                                |
| 3988                   | 13895                 | 23672             | 1.47                 | 3.9E-01                                       | BF592611.1               | EST_HUMAN                     | 7f61d01.x1 NCL CGAP_Br16 Homo sapiens cDNA clone IMAGE:3339169 3'                                                                                                                     |
| 4919                   | 14798                 | 24572             | 1.48                 | 3.9E-01                                       | BE728667.1               | EST_HUMAN                     | 601563948F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3833699 5'                                                                                                                       |
| 5613                   | 15528                 | 25611             | 3.63                 | 3.9E-01                                       | BF208036.1               | EST_HUMAN                     | 601862362F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:4082055 5'                                                                                                                       |
| 7324                   | 17200                 | 27400             | 1.5                  | 3.9E-01                                       | AW195888.1               | EST_HUMAN                     | xi86d04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2701351 3' similar to TR:O94821<br>O94821 KIAA0713 PROTEIN ;                                                             |
| 7503                   | 17372                 | 27581             | 1.4                  | 3.9E-01                                       | AB937337.1               | EST_HUMAN                     | wp76a02.x1 NCL CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2467658 3' similar to<br>SW:REF5_HUMAN P48382 BINDING REGULATORY FACTOR. ;                                                     |
| 7680                   | 17530                 | 27755             | 2.97                 | 3.9E-01                                       | M19879.1                 | NT                            | Human clabindin 27 gene, exons 10 and 11, and L1 and Alu repeats                                                                                                                      |
| 8195                   | 18080                 |                   | 2.22                 | 3.9E-01                                       | AV695974.1               | EST_HUMAN                     | AV695974 GKC Homo sapiens cDNA clone GKCBCQ11 5'                                                                                                                                      |
| 9091                   | 19642                 |                   | 2.49                 | 3.9E-01                                       | AF304354.1               | NT                            | Homo sapiens proteoglycan 3 (PRG3) gene, complete cds                                                                                                                                 |
| 9209                   | 18940                 |                   | 2.38                 | 3.9E-01                                       | Q61670                   | SWISSPROT                     | HOMEOBOX PROTEIN HLX1                                                                                                                                                                 |
| 9288                   | 18900                 | 25328             | 1.26                 | 3.9E-01                                       | AE001811.1               | NT                            | Thermotoga maritima section 123 of 136 of the complete genome                                                                                                                         |
| 154                    | 10128                 |                   | 7.44                 | 3.8E-01                                       | 7019498                  | NT                            | Homo sapiens protein kinase PKNbeta (pknbeta), mRNA                                                                                                                                   |
| 1827                   | 11724                 |                   | 1.22                 | 3.8E-01                                       | AE003870.1               | NT                            | Xylella fastidiosa, section 16 of 229 of the complete genome                                                                                                                          |
| 2524                   | 12398                 | 22289             | 2.44                 | 3.8E-01                                       | AF214117.1               | NT                            | Arabidopsis thaliana putative c-myc-like transcription factor (MYB3R-3) mRNA, complete cds                                                                                            |
| 2591                   | 12726                 | 22352             | 4.41                 | 3.8E-01                                       | 6678002                  | NT                            | Mus musculus solute carrier family 1, member 6 (Slc1a6), mRNA                                                                                                                         |
| 2972                   | 12899                 |                   | 0.92                 | 3.8E-01                                       | AJ251057.1               | NT                            | Human immunodeficiency virus type 1 complete genome (isolate 98SE-MP1213)                                                                                                             |
| 3010                   | 12938                 | 22732             | 2                    | 3.8E-01                                       | AF043383.1               | NT                            | Pleurocetes americanus aminopeptidase N (ampN) gene, partial cds                                                                                                                      |
| 3438                   | 13355                 | 23160             | 7.77                 | 3.8E-01                                       | AL161518.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 30                                                                                                                         |
| 3494                   | 13410                 |                   | 0.79                 | 3.8E-01                                       | AB07219.1                | EST_HUMAN                     | wf38b12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2357855 3'                                                                                                               |
| 3506                   | 13410                 |                   | 0.91                 | 3.8E-01                                       | AB07219.1                | EST_HUMAN                     | wf38b12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2357855 3'                                                                                                               |
| 3841                   | 13752                 | 23545             | 0.85                 | 3.8E-01                                       | 6754095                  | NT                            | Mus musculus general transcription factor II I (Gtf2i), mRNA                                                                                                                          |
| 5046                   | 14918                 | 24692             | 0.98                 | 3.8E-01                                       | BE544653.1               | EST_HUMAN                     | 601074110F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3460154 5'                                                                                                                       |
| 5445                   | 15366                 | 25422             | 1.62                 | 3.8E-01                                       | Q04888                   | SWISSPROT                     | TRANSCRIPTION FACTOR SOX-10                                                                                                                                                           |
| 5994                   | 15899                 | 28023             | 4.47                 | 3.8E-01                                       | BE072399.1               | EST_HUMAN                     | QV3-BT0537-271299-049-e02 BT0537 Homo sapiens cDNA<br>ta54f11.x1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:2047917 3' similar to<br>contains Alu repetitive element; |
| 6053                   | 16036                 | 26177             | 3.81                 | 3.8E-01                                       | AB174601.1               | EST_HUMAN                     | M.musculus gene for kallikrein-binding protein                                                                                                                                        |
| 6438                   | 16299                 |                   | 4.83                 | 3.8E-01                                       | X61597.1                 | NT                            | Homo sapiens mRNA for KIAA1631 protein, partial cds                                                                                                                                   |
| 6980                   | 16857                 | 27052             | 3.07                 | 3.8E-01                                       | AB046851.1               | NT                            |                                                                                                                                                                                       |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                   |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7516                   | 17304                 |                   | 4.11                 | 3.8E-01                                       | T95413.1                 | EST_HUMAN                     | ye43h06.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:120539 5' similar to contains<br>Alu repetitive element; contains PTRS repetitive element : |
| 8820                   | 18633                 |                   | 2.82                 | 3.8E-01                                       | BE719219.1               | EST_HUMAN                     | RCO-HT0841-040800-032-b12 HT0841 Homo sapiens cDNA                                                                                                                   |
| 8939                   | 18747                 | 28041             | 2.57                 | 3.8E-01                                       | R42550.1                 | EST_HUMAN                     | yf92h11.s1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:30289 3'                                                                                           |
| 8939                   | 18747                 | 28042             | 2.57                 | 3.8E-01                                       | R42550.1                 | EST_HUMAN                     | yf92h11.s1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:30289 3'                                                                                           |
| 9297                   | 18997                 |                   | 2.38                 | 3.8E-01                                       | AE001124.1               | NT                            | Borrelia burgdorferi (section 10 of 70) of the complete genome                                                                                                       |
| 9422                   | 19661                 |                   | 1.34                 | 3.8E-01                                       | U94788.1                 | NT                            | Human p53 (TP53) gene, complete cds                                                                                                                                  |
| 9530                   | 19137                 |                   | 2.21                 | 3.8E-01                                       | BE829258.1               | EST_HUMAN                     | QV3-ET0063-190700-271-a05 ET0063 Homo sapiens cDNA                                                                                                                   |
| 9917                   | 19638                 |                   | 1.84                 | 3.8E-01                                       | AF291483.1               | NT                            | Mus musculus vomeronasal receptor V1RA4 (V1ra4) gene, complete cds                                                                                                   |
| 9921                   | 19675                 | 24993             | 1.37                 | 3.8E-01                                       | T54787.1                 | EST_HUMAN                     | yf42b11.s1 Stragene fetal spleen (#937205) Homo sapiens cDNA clone IMAGE:73821 3' similar to similar<br>to gb:A06977 SERUM ALBUMIN PRECURSOR (HUMAN)                 |
| 9937                   | 19406                 | 25180             | 1.3                  | 3.8E-01                                       | AF194972.1               | NT                            | Mus musculus developmental control protein mRNA, partial cds                                                                                                         |
| 9970                   | 19430                 | 25151             | 1.33                 | 3.8E-01                                       | AA776820.1               | EST_HUMAN                     | ah37b01.s1 Soares testis_NHT Homo sapiens cDNA clone 1291657 3' similar to TR:Q15288 Q15288 NO<br>DISTINCTIVE PROTEIN MOTIFS. ;                                      |
| 2431                   | 12308                 | 22203             | 9.85                 | 3.7E-01                                       | AB037831.1               | NT                            | Homo sapiens mRNA for KIAA1410 protein, partial cds                                                                                                                  |
| 3414                   | 13331                 | 23133             | 9.48                 | 3.7E-01                                       | AF056336.1               | NT                            | Danio rerio bone morphogenetic protein 4 precursor (BMP4) gene, complete cds                                                                                         |
| 4136                   | 14036                 | 23812             | 6.63                 | 3.7E-01                                       | AI218707.1               | EST_HUMAN                     | ok39c07.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:1510188 3'                                                                                      |
| 4225                   | 14123                 | 23898             | 1.53                 | 3.7E-01                                       | AW878037.1               | EST_HUMAN                     | MR3-OT0007-080300-104-b02 OT0007 Homo sapiens cDNA                                                                                                                   |
| 4292                   | 14190                 | 23974             | 3.32                 | 3.7E-01                                       | AE002408.1               | NT                            | Neisseria meningitidis serogroup B strain MC58 section 50 of 206 of the complete genome                                                                              |
| 6235                   | 16101                 | 26250             | 2.73                 | 3.7E-01                                       | 11525843                 | NT                            | Homo sapiens tumor endothelial marker 7 precursor (TEM7), mRNA                                                                                                       |
| 6392                   | 16254                 | 26415             | 4.51                 | 3.7E-01                                       | BE873743.1               | EST_HUMAN                     | 601483887F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3886652 5'                                                                                                      |
| 6392                   | 16254                 | 26416             | 4.51                 | 3.7E-01                                       | BE873743.1               | EST_HUMAN                     | 601483887F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3886652 5'                                                                                                      |
| 6848                   | 16727                 | 26921             | 2.34                 | 3.7E-01                                       | 11436739                 | NT                            | Homo sapiens chromosome 12 open reading frame 4 (C12ORF4), mRNA                                                                                                      |
| 6848                   | 16727                 | 26922             | 2.34                 | 3.7E-01                                       | 11436739                 | NT                            | Homo sapiens chromosome 12 open reading frame 4 (C12ORF4), mRNA                                                                                                      |
| 7307                   | 17183                 |                   | 1.46                 | 3.7E-01                                       | AJ271386.1               | NT                            | Gallus gallus mRNA for beta-carotene 15,15'-dioxygenase (bCDO gene)                                                                                                  |
| 7864                   | 17714                 | 27958             | 3.93                 | 3.7E-01                                       | AI336411.1               | EST_HUMAN                     | qt46b07.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1950997 3'                                                                                        |
| 8232                   | 18113                 | 28365             | 1.81                 | 3.7E-01                                       | X05958.1                 | NT                            | Rabbit mRNA for fast skeletal muscle myosin heavy chain (MHC)                                                                                                        |
| 8392                   | 18268                 | 28518             | 2.66                 | 3.7E-01                                       | AJ297357.1               | NT                            | Homo sapiens partial LIMD1 gene for LIM domains containing protein 1 and KIAA0851 gene                                                                               |
| 8392                   | 18268                 | 28519             | 2.66                 | 3.7E-01                                       | AJ297357.1               | NT                            | Homo sapiens partial LIMD1 gene for LIM domains containing protein 1 and KIAA0851 gene                                                                               |
| 8762                   | 17911                 | 28155             | 4.23                 | 3.7E-01                                       | X04122.1                 | NT                            | Bovine mRNA for terminal deoxynucleotidyltransferase (TdT) (EC 2.7.7.31)                                                                                             |
| 8979                   | 18784                 |                   | 2.76                 | 3.7E-01                                       | 6677678                  | NT                            | Mus musculus retinoblastoma 1 (Rb1), mRNA                                                                                                                            |
| 9008                   | 19303                 |                   | 1.87                 | 3.7E-01                                       | J04982.1                 | NT                            | Human heart/skeletal muscle ATP/ADP translocator (ANT1) gene, complete cds                                                                                           |
| 9176                   | 18917                 |                   | 1.94                 | 3.7E-01                                       | AJ243525.1               | NT                            | Chlamydomonas psittaci partial omp1 gene for outer membrane protein 1                                                                                                |
| 9272                   | 18976                 |                   | 2.41                 | 3.7E-01                                       | D66976.1                 | NT                            | Human mRNA for KIAA0223 gene, partial cds                                                                                                                            |

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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                     |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 9634                   | 19206                 |                   | 2.18                 | 3.7E-01                                       | AL121154.1               | EST_HUMAN                     | DKFZp762K075_r1 762 (synonym: hmel2) Homo sapiens cDNA clone DKFZp762K075 5'                                                           |
| 9701                   | 19251                 | 25217             | 1.52                 | 3.7E-01                                       | Y18000.1                 | NT                            | Homo sapiens NF2 gene                                                                                                                  |
| 9964                   | 19746                 |                   | 1.31                 | 3.7E-01                                       | AJ237934.1               | NT                            | Bos taurus partial stat5B gene, exons 2-15 and joined CDS                                                                              |
| 979                    | 10902                 |                   | 7.17                 | 3.6E-01                                       | U89241.1                 | NT                            | Human mlbp gene, partial cds                                                                                                           |
| 1292                   | 11199                 | 21054             | 2.59                 | 3.6E-01                                       | T80255.1                 | EST_HUMAN                     | yc03e05.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:24443 5'                                                             |
| 1292                   | 11199                 | 21055             | 2.59                 | 3.6E-01                                       | T80255.1                 | EST_HUMAN                     | yc03e05.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:24443 5'                                                             |
| 1874                   | 11770                 | 21645             | 6.05                 | 3.6E-01                                       | AW590184.1               | EST_HUMAN                     | hg33f02.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2947419 3'                                                                       |
| 1874                   | 11770                 | 21646             | 6.05                 | 3.6E-01                                       | AW590184.1               | EST_HUMAN                     | hg33f02.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2947419 3'                                                                       |
| 1908                   | 11803                 | 21682             | 6.18                 | 3.6E-01                                       | AF216207.1               | NT                            | Mus musculus ribosomal protein S19 (Rps19) gene, complete cds                                                                          |
| 2007                   | 11899                 |                   | 1.08                 | 3.6E-01                                       | AF056927.1               | NT                            | Rattus norvegicus repeat element associated with the Rasgrf1 gene                                                                      |
| 2223                   | 12108                 |                   | 1.04                 | 3.6E-01                                       | AB002321.1               | NT                            | Human mRNA for KIAA0323 gene, partial cds                                                                                              |
| 2341                   | 12221                 |                   | 2.39                 | 3.6E-01                                       | X76725.1                 | NT                            | P. irregularis (P3804) gene for actin                                                                                                  |
| 2437                   | 12314                 | 22211             | 1.63                 | 3.6E-01                                       | AW812033.1               | EST_HUMAN                     | RC5-ST0171-181099-011-g07 ST0171 Homo sapiens cDNA                                                                                     |
|                        |                       |                   |                      |                                               |                          |                               | PROTEIN-L-ISOASPARTATE O-METHYLTRANSFERASE (PROTEIN-BETA-ASPARTATE METHYLTRANSFERASE) (PIMT) (PROTEIN L-ISOASPARTYL METHYLTRANSFERASE) |
| 2589                   | 12460                 | 22350             | 2.28                 | 3.6E-01                                       | P24206                   | SWISSPROT                     | ISOASPARTYL PROTEIN CARBOXYL METHYLTRANSFERASE                                                                                         |
| 2869                   | 15077                 |                   | 8.9                  | 3.6E-01                                       | AF199485.1               | NT                            | Drosophila melanogaster sugar transporter 3 (suf3) mRNA, complete cds                                                                  |
| 3424                   | 13341                 | 23145             | 1.85                 | 3.6E-01                                       | X76758.1                 | NT                            | H. sapiens serotonin transporter gene, exons 9 and 10                                                                                  |
| 3424                   | 13341                 | 23146             | 1.85                 | 3.6E-01                                       | X76758.1                 | NT                            | H. sapiens serotonin transporter gene, exons 9 and 10                                                                                  |
| 4308                   | 14205                 | 23988             | 1.16                 | 3.6E-01                                       | BE707883.1               | EST_HUMAN                     | RC1-HT0545-150600-014-b12 HT0545 Homo sapiens cDNA                                                                                     |
| 4635                   | 14523                 | 24312             | 0.85                 | 3.6E-01                                       | AJ009609.1               | NT                            | Brassica napus mRNA for MAP4K alpha2 protein                                                                                           |
| 4684                   | 14570                 | 24367             | 1.23                 | 3.6E-01                                       | AJ229237.1               | NT                            | Bacteria from anoxic bulk soil 16S rRNA gene (strain XB45)                                                                             |
| 4941                   | 14819                 | 24587             | 2.01                 | 3.6E-01                                       | AW339393.1               | EST_HUMAN                     | ha02g04.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2872586 3'                                                                      |
| 5899                   | 15805                 | 25928             | 1.6                  | 3.6E-01                                       | Y10196.1                 | NT                            | Homo sapiens PHEX gene                                                                                                                 |
| 6238                   | 16104                 |                   | 5.49                 | 3.6E-01                                       | R94090.1                 | EST_HUMAN                     | Y74406.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:275987 5'                                                      |
| 6317                   | 16180                 | 26340             | 1.66                 | 3.6E-01                                       | AW027174.1               | EST_HUMAN                     | w72c10.x1 Soares_thymus_NHFTb Homo sapiens cDNA clone IMAGE:2513010 3' similar to TR:O16117                                            |
| 6816                   | 16895                 | 26886             | 13.42                | 3.6E-01                                       | AL161583.2               | NT                            | O15117 FYN BINDING PROTEIN. [1];<br>Arabidopsis thaliana DNA chromosome 4, contig fragment No. 79                                      |
| 7205                   | 17082                 | 27269             | 3.37                 | 3.6E-01                                       | 4504956                  | NT                            | Homo sapiens lysosomal-associated membrane protein 2 (LAMP2), transcript variant LAMP2A, mRNA                                          |
| 7205                   | 17082                 | 27270             | 3.37                 | 3.6E-01                                       | 4504956                  | NT                            | Homo sapiens lysosomal-associated membrane protein 2 (LAMP2), transcript variant LAMP2A, mRNA                                          |
| 7302                   | 17178                 | 27380             | 1.4                  | 3.6E-01                                       | AL183204.2               | NT                            | Homo sapiens chromosome 21 segment HS21C004                                                                                            |
| 7674                   | 17624                 | 27750             | 15.34                | 3.6E-01                                       | Q53194                   | SWISSPROT                     | PROBABLE PEPTIDE ABC TRANSPORTER ATP-BINDING PROTEIN Y4TS                                                                              |

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Table 4  
Single Exon Probes Expressed in Heart

| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                    |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8314                   | 18191                 | 28440             | 1.94                 | 3.6E-01                                       | BE902390.1               | EST_HUMAN                     | 601676418F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:395997 5'                                                                                        |
| 8453                   | 18326                 | 28585             | 3.69                 | 3.6E-01                                       | AB004293.1               | NT                            | Arabidopsis thaliana mRNA for SigB, complete cds                                                                                                      |
| 8741                   | 17890                 | 28134             | 3.56                 | 3.6E-01                                       | AE000856.1               | NT                            | Methanobacterium thermoautotrophicum from bases 702375 to 714311 (section 62 of 148) of the complete genome                                           |
| 9044                   | 19761                 |                   | 1.81                 | 3.6E-01                                       | Y19210.1                 | NT                            | Homo sapiens hHb5 gene for hair keratin, exons 1 to 9                                                                                                 |
| 9127                   | 18886                 |                   | 3.05                 | 3.6E-01                                       | AE000335.1               | NT                            | Escherichia coli K-12 MG1655 section 225 of 400 of the complete genome                                                                                |
| 9281                   | 18963                 |                   | 3.03                 | 3.6E-01                                       | U66988.1                 | NT                            | Mus musculus Emr1 mRNA, complete cds                                                                                                                  |
| 9889                   | 19704                 |                   | 1.58                 | 3.6E-01                                       | AW190229.1               | EST_HUMAN                     | xi60e11.x1 NCI CGAP_Par1 Homo sapiens cDNA clone IMAGE:2679116 3' similar to gb:K00558 TUBULIN ALPHA-1 CHAIN (HUMAN);                                 |
| 202                    | 10174                 | 19990             | 2.18                 | 3.5E-01                                       | 6678933                  | NT                            | Mus musculus mannose receptor, C type 2 (Mrc2), mRNA                                                                                                  |
| 662                    | 10596                 | 20414             | 0.97                 | 3.5E-01                                       | AL161581.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 77                                                                                         |
| 708                    | 10640                 | 20466             | 1.24                 | 3.5E-01                                       | 7706136                  | NT                            | Homo sapiens GAP-like protein (LOC51306), mRNA                                                                                                        |
| 708                    | 10640                 | 20467             | 1.24                 | 3.5E-01                                       | 7706136                  | NT                            | Homo sapiens GAP-like protein (LOC51306), mRNA                                                                                                        |
| 763                    | 10694                 | 20531             | 3.17                 | 3.5E-01                                       | BF129796.1               | EST_HUMAN                     | 601811060R1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4053951 3'                                                                                       |
| 1603                   | 11508                 | 21370             | 1.17                 | 3.5E-01                                       | BF310688.1               | EST_HUMAN                     | 601894653F2 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4124244 5'                                                                                       |
| 1622                   | 11526                 | 21384             | 1.05                 | 3.5E-01                                       | U35776.1                 | NT                            | Rattus norvegicus ADP-ribosylation factor-directed GTPase activating protein mRNA, complete cds                                                       |
| 2563                   | 12725                 | 22327             | 1.85                 | 3.5E-01                                       | AA223252.1               | EST_HUMAN                     | zr08a09.s1 Strategene NT2 neuronal precursor 937230 Homo sapiens cDNA clone IMAGE:650872 3'                                                           |
| 2672                   | 12537                 |                   | 0.86                 | 3.5E-01                                       | U05897.1                 | NT                            | Fibrobacter succinogenes S85 endoglucanase E (celE) and endoglucanase D (celD) gene, complete cds                                                     |
| 4165                   | 14065                 | 23839             | 1.92                 | 3.5E-01                                       | AF071253.1               | NT                            | Danio rerio homeobox protein (hox5b) gene, complete cds                                                                                               |
| 4379                   | 14275                 | 24056             | 1.29                 | 3.5E-01                                       | BE146585.1               | EST_HUMAN                     | RC5-HT0218-181099-011-g02 HT0218 Homo sapiens cDNA                                                                                                    |
| 4790                   | 14675                 | 24462             | 0.84                 | 3.5E-01                                       | N81203.1                 | EST_HUMAN                     | 788IE1 fetal brain cDNA Homo sapiens cDNA clone 788IE1-K similar to R07879, Z40498                                                                    |
| 4849                   | 14730                 | 24513             | 3.84                 | 3.5E-01                                       | M18349.1                 | NT                            | Rat leukocyte common antigen (L-CA) gene, exons 1 through 5                                                                                           |
| 6199                   | 15959                 |                   | 3.47                 | 3.5E-01                                       | X98505.1                 | NT                            | S. scrofa mRNA for CD31 protein (PECAM-1).                                                                                                            |
| 6704                   | 16584                 |                   | 1.88                 | 3.5E-01                                       | 11448042                 | NT                            | Homo sapiens tumor protein p53-binding protein, 2 (TP53BP2), mRNA                                                                                     |
| 7171                   | 17048                 | 27238             | 3.21                 | 3.5E-01                                       | 4507610                  | NT                            | Homo sapiens tyrosine kinase non-receptor 1 (TNK1), mRNA                                                                                              |
| 7612                   | 17463                 | 27680             | 1.51                 | 3.5E-01                                       | Q02294                   | SWISSPROT                     | VOLTAGE-DEPENDENT N-TYPE CALCIUM CHANNEL ALPHA-1B SUBUNIT (CALCIUM CHANNEL, L TYPE, ALPHA-1 POLYPEPTIDE ISOFORM 5) (BRAIN CALCIUM CHANNEL III) (BIII) |
| 7688                   | 17538                 | 27764             | 5                    | 3.5E-01                                       | Z26825.1                 | NT                            | X.laavis gene for albumin including HP1 enhancer                                                                                                      |
| 8116                   | 18005                 | 28251             | 2.99                 | 3.5E-01                                       | X61084.1                 | NT                            | C.griseus rhodopsin gene for opsin protein                                                                                                            |
| 8366                   | 18263                 | 28513             | 2.34                 | 3.5E-01                                       | AJ243178.1               | NT                            | Gallus gallus SPARC gene for osteonectin, promoter and exon 1                                                                                         |
| 8386                   | 18263                 | 28514             | 2.34                 | 3.5E-01                                       | AJ243178.1               | NT                            | Gallus gallus SPARC gene for osteonectin, promoter and exon 1                                                                                         |

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Table 4  
Single Exon Probes Expressed in Heart

| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 8951                   | 18758                 | 23052             | 3.34                 | 3.5E-01                                       | AL161501.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 13                                                                                 |
| 9206                   | 18937                 |                   | 2.12                 | 3.5E-01                                       | X64565.1                 | NT                            | B. taurus alp1 gene for F(0)F(1) ATP synthase alpha-subunit                                                                                   |
| 9941                   | 19616                 | 24999             | 2.25                 | 3.5E-01                                       | H80814.1                 | EST_HUMAN                     | ys64f11.1 r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:219597 5'                                                                     |
| 9941                   | 19616                 | 25000             | 2.25                 | 3.5E-01                                       | H80814.1                 | EST_HUMAN                     | ys64f11.1 r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:219597 5'                                                                     |
| 691                    | 10624                 |                   | 1.9                  | 3.4E-01                                       | AJ242956.1               | NT                            | Homo sapiens partial N-myc (exon 3), HPV45 L2, HPV45 L1, HPV45 E6, HPV45 E7 and HPV45 E1 genes isolated from IC4 cervical carcinoma cell line |
| 960                    | 10863                 | 20731             | 4.53                 | 3.4E-01                                       | Y09798.2                 | NT                            | Pseudomonas fluorescens colR, colS genes, of222 and partial inaA gene                                                                         |
| 1304                   | 11211                 | 21066             | 1.73                 | 3.4E-01                                       | Y00554.1                 | NT                            | Azotobacter vinelandii nitA gene for NifA protein (positive regulatory element)                                                               |
| 2352                   | 12232                 | 22129             | 2.81                 | 3.4E-01                                       | D90909.1                 | NT                            | Synechocystis sp. PCC6803 complete genome, 11/27, 1311235-1430418                                                                             |
| 2842                   | 12509                 | 22400             | 1.46                 | 3.4E-01                                       | AL161516.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 28                                                                                 |
| 2971                   | 12898                 | 22697             | 0.81                 | 3.4E-01                                       | AL163210.2               | NT                            | Homo sapiens chromosome 21 segment HS21C010                                                                                                   |
| 2971                   | 12898                 | 22698             | 0.81                 | 3.4E-01                                       | AL163210.2               | NT                            | Homo sapiens chromosome 21 segment HS21C010                                                                                                   |
| 3124                   | 13049                 | 22846             | 5.41                 | 3.4E-01                                       | U83905.1                 | NT                            | Canis familiaris rod photoreceptor cGMP-gated channel alpha-subunit (CNCG1) mRNA, complete cds                                                |
| 3488                   | 13404                 | 23209             | 3.48                 | 3.4E-01                                       | AF106835.1               | NT                            | Methylovorus sp. strain SS1 putative GrpE (grpE), DnaK (dnaK), and putative DnaJ (dnaJ) genes, complete cds                                   |
| 3722                   | 13634                 |                   | 2.33                 | 3.4E-01                                       | BF449010.1               | EST_HUMAN                     | 7n94a01.x1 NCI_CGAP_Ov18 Homo sapiens cDNA clone IMAGE:3572232 3' similar to TR:Q9UJ15                                                        |
| 3965                   | 13872                 |                   | 1.16                 | 3.4E-01                                       | AA584196.1               | EST_HUMAN                     | Q9UJ15 DJ18C9.1                                                                                                                               |
| 4394                   | 14290                 | 24074             | 0.78                 | 3.4E-01                                       | AF166341.1               | NT                            | not1b10.s1 NCI_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100347 3'                                                                             |
| 4544                   | 14437                 | 24221             | 1.82                 | 3.4E-01                                       | BE069912.1               | EST_HUMAN                     | Homo sapiens integrin alpha 6 (ITGA6) gene, exons 12 through 23                                                                               |
| 4828                   | 14710                 | 24494             | 0.93                 | 3.4E-01                                       | BE463761.1               | EST_HUMAN                     | MIR4-BT0403-230200-202-c01 BT0403 Homo sapiens cDNA                                                                                           |
| 4870                   | 14750                 |                   | 3.57                 | 3.4E-01                                       | AI240973.1               | EST_HUMAN                     | hy17d09.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:3197585 3' similar to contains L1.13 L1 repetitive element                              |
| 4970                   | 14845                 | 24614             | 1.2                  | 3.4E-01                                       | X16544.1                 | NT                            | qj95c05.x1 NCI_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1867208 3' similar to contains Alu repetitive element                                  |
| 5487                   | 15406                 | 25469             | 2.85                 | 3.4E-01                                       | AL161594.2               | NT                            | Sea urchin hsp70 gene II for heat shock protein 70                                                                                            |
| 5551                   | 15467                 |                   | 4.71                 | 3.4E-01                                       | AA086313.1               | EST_HUMAN                     | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 90                                                                                 |
| 5654                   | 15566                 |                   | 2.06                 | 3.4E-01                                       | LO2971.1                 | NT                            | zn12d11.s1 Stratagene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:547221 3'                                                            |
| 5715                   | 15623                 | 25724             | 2.57                 | 3.4E-01                                       | AW204505.1               | EST_HUMAN                     | Echovirus 22 1AB, 1C, 1D, 2A, 2B, 2C, 3A, 3B, 3C, 3D proteins RNA, complete mature peptides and cds                                           |
| 5780                   | 15687                 | 25796             | 1.47                 | 3.4E-01                                       | AL120544.1               | EST_HUMAN                     | UJ-H-B11-aei-e-12-0-UJ.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2719582 3'                                                              |
| 6045                   | 15948                 |                   | 1.52                 | 3.4E-01                                       | N95225.1                 | EST_HUMAN                     | DKFZp761A249_r1 761 (synonym: harny2) Homo sapiens cDNA clone DKFZp761A249 5'                                                                 |
|                        |                       |                   |                      |                                               |                          |                               | zb53e12.s1 Soares_fetal_lung_NbHL-19W Homo sapiens cDNA clone IMAGE:307342 3'                                                                 |



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| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                                                                                                                            |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6148                   | 16021                 | 26161             | 1.41                 | 3.4E-01                                       | AI468082.1               | EST_HUMAN                     | tm63g05.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2162840 3' similar to gb:S37431                                                                                                                                                                        |
| 6943                   | 16821                 |                   | 1.77                 | 3.4E-01                                       | AA337063.1               | EST_HUMAN                     | LAMININ RECEPTOR (HUMAN);                                                                                                                                                                                                                                     |
| 7139                   | 17016                 | 27209             | 1.62                 | 3.4E-01                                       | 9633624                  | NT                            | EST41765 Endometrial tumor Homo sapiens cDNA 5' end                                                                                                                                                                                                           |
| 7313                   | 17189                 | 27390             | 3.88                 | 3.4E-01                                       | P26013                   | SWISSPROT                     | Bovine enterovirus strain K2577, complete genome                                                                                                                                                                                                              |
| 7313                   | 17189                 | 27391             | 3.88                 | 3.4E-01                                       | P26013                   | SWISSPROT                     | INTEGRIN BETA-8 PRECURSOR                                                                                                                                                                                                                                     |
| 7433                   | 16446                 | 26635             | 4.17                 | 3.4E-01                                       | U19492.1                 | NT                            | INTEGRIN BETA-8 PRECURSOR                                                                                                                                                                                                                                     |
| 7433                   | 16446                 | 26636             | 4.17                 | 3.4E-01                                       | U19492.1                 | NT                            | Saccharomyces cerevisiae Maf1p (MAF1) gene, complete cds                                                                                                                                                                                                      |
| 7680                   | 17540                 | 27766             | 2.22                 | 3.4E-01                                       | AJ225084.1               | NT                            | Saccharomyces cerevisiae Maf1p (MAF1) gene, complete cds                                                                                                                                                                                                      |
| 8380                   | 18257                 |                   | 4.09                 | 3.4E-01                                       | AE000881.1               | NT                            | Homo sapiens FAA gene, exon 16, 17 and 18                                                                                                                                                                                                                     |
| 8407                   | 18283                 | 28536             | 2.2                  | 3.4E-01                                       | P06925                   | SWISSPROT                     | Methanobacterium thermoautotrophicum from bases 1018444 to 1029212 (section 87 of 148) of the complete genome                                                                                                                                                 |
| 8440                   | 18314                 | 28572             | 2.26                 | 3.4E-01                                       | AF045981.1               | NT                            | PROBABLE E4 PROTEIN                                                                                                                                                                                                                                           |
| 8604                   | 18471                 | 28742             | 1.77                 | 3.4E-01                                       | M25856.1                 | NT                            | Rutillus arcasii cytochrome b (cytb) gene, mitochondrial gene encoding mitochondrial protein, partial cds                                                                                                                                                     |
| 8604                   | 18471                 | 28743             | 1.77                 | 3.4E-01                                       | M25856.1                 | NT                            | Human von Willebrand factor gene, exons 36 and 37                                                                                                                                                                                                             |
| 8790                   | 18605                 | 28895             | 1.8                  | 3.4E-01                                       | AB035507.1               | NT                            | Human von Willebrand factor gene, exons 36 and 37                                                                                                                                                                                                             |
| 8814                   | 18627                 | 28916             | 4.03                 | 3.4E-01                                       | AL161515.2               | NT                            | Rattus norvegicus mRNA for s-gicerin/MUC18, complete cds                                                                                                                                                                                                      |
| 9020                   | 18814                 |                   | 2.01                 | 3.4E-01                                       | U93604.1                 | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 27                                                                                                                                                                                                 |
| 9130                   | 18887                 |                   | 1.3                  | 3.4E-01                                       | Z21621.1                 | NT                            | Citrus variegation virus putative replicase gene, partial cds                                                                                                                                                                                                 |
| 9229                   | 19508                 |                   | 1.82                 | 3.4E-01                                       | AF254351.1               | NT                            | S. cerevisiae RIB5 gene encoding Riboflavin synthase                                                                                                                                                                                                          |
| 9347                   | 19024                 |                   | 4.9                  | 3.4E-01                                       | IL26339.1                | NT                            | Schizosaccharomyces pombe Cwf8p (cwf8) gene, complete cds                                                                                                                                                                                                     |
| 9378                   | 19598                 |                   | 2.49                 | 3.4E-01                                       | BE218652.1               | EST_HUMAN                     | Human autoantigen mRNA, complete cds                                                                                                                                                                                                                          |
| 9432                   | 19639                 |                   | 2.13                 | 3.4E-01                                       | 9838361                  | NT                            | hy42h08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3176127 3' similar to contains PTR5.13                                                                                                                                                                 |
| 9537                   | 19140                 | 28264             | 1.79                 | 3.4E-01                                       | AJ297131.1               | NT                            | PTR5 repetitive element ;                                                                                                                                                                                                                                     |
| 9829                   | 19330                 |                   | 1.79                 | 3.4E-01                                       | AF019413.1               | NT                            | Beta vulgaris mitochondrion, complete genome                                                                                                                                                                                                                  |
| 14                     | 10000                 | 19791             | 7.91                 | 3.3E-01                                       | X07990.1                 | NT                            | Mus musculus SIL, MAP_17, CYP_a, SCL & CYP_b genes                                                                                                                                                                                                            |
| 100                    | 10000                 | 19791             | 3.92                 | 3.3E-01                                       | X07990.1                 | NT                            | Homo sapiens HLA class III region containing tenascin X (tenascin-X) gene, partial cds: cytochrome P450 21-hydroxylase (CYP21B), complement component C4 (C4B) G11, helicase (SK12W), RD, complement factor B (Bf), and complement component C2 (C2) genes, > |
| 440                    | 10384                 | 20208             | 1.16                 | 3.3E-01                                       | AL161545.2               | NT                            | Rhizobium leguminosarum sym plasmid pRL5J1 nodX gene                                                                                                                                                                                                          |
| 617                    | 10554                 | 20366             | 1.41                 | 3.3E-01                                       | Q12446                   | SWISSPROT                     | Rhizobium leguminosarum sym plasmid pRL5J1 nodX gene                                                                                                                                                                                                          |
| 1182                   | 11093                 | 20940             | 3.05                 | 3.3E-01                                       | Q12446                   | SWISSPROT                     | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 45                                                                                                                                                                                                 |
|                        |                       |                   |                      |                                               |                          |                               | Homo sapiens KIAA1100 protein (KIAA1100), mRNA                                                                                                                                                                                                                |
|                        |                       |                   |                      |                                               |                          |                               | PROLINE-RICH PROTEIN LAS17                                                                                                                                                                                                                                    |

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Table 4  
Single Exon Probes Expressed in Heart

| Probe<br>SEQ ID<br>NO: | Exon<br>SEQ ID<br>NO: | ORF SEQ<br>ID NO: | Expression<br>Signal | Most Similar<br>(Top) Hit<br>BLAST E<br>Value | Top Hit Accession<br>No. | Top Hit<br>Database<br>Source | Top Hit Descriptor                                                                                                                                     |
|------------------------|-----------------------|-------------------|----------------------|-----------------------------------------------|--------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1285                   | 11193                 | 21046             | 4.82                 | 3.3E-01                                       | BF588880.1               | EST_HUMAN                     | 602184016T1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300251 3'                                                                                        |
| 1588                   | 11492                 | 21352             | 1.11                 | 3.3E-01                                       | 6753685                  | NT                            | Mus musculus disintegrin 5 (Dign5), mRNA                                                                                                               |
| 1704                   | 11605                 |                   | 1.05                 | 3.3E-01                                       | AA332734.1               | EST_HUMAN                     | EST36722 Embryo, 8 week 1 Homo sapiens cDNA 5' end                                                                                                     |
| 2355                   | 12235                 |                   | 4.74                 | 3.3E-01                                       | 4507834                  | NT                            | Homo sapiens uridine monophosphate synthetase (orotate phosphoribosyl transferase and orotidine-5'-decarboxylase) (UMPS) mRNA                          |
| 2919                   | 12846                 | 22648             | 2                    | 3.3E-01                                       | AJ251805.1               | NT                            | Bacteriophage phi-Yeo3-12 complete genome                                                                                                              |
| 2982                   | 12910                 |                   | 1.12                 | 3.3E-01                                       | O02743                   | SWISSPROT                     | INTERLEUKIN-12 ALPHA CHAIN PRECURSOR (IL-12A) (CYTOTOXIC LYMPHOCYTE MATURATION FACTOR 35 KD SUBUNIT) (CLMF P35)                                        |
| 3016                   | 12944                 | 22737             | 1.01                 | 3.3E-01                                       | AJ007932.2               | NT                            | Streptomyces argillaceus milthramycin biosynthetic genes                                                                                               |
| 3450                   | 13367                 | 23173             | 1.14                 | 3.3E-01                                       | AB012922.1               | NT                            | Homo sapiens MTA1-L1 gene, complete cds                                                                                                                |
| 3738                   | 13650                 | 23433             | 2.17                 | 3.3E-01                                       | O84645                   | SWISSPROT                     | EXODEOXYRIBONUCLEASE V BETA CHAIN                                                                                                                      |
| 3884                   | 13795                 | 23582             | 1.59                 | 3.3E-01                                       | AL161498.2               | NT                            | Arabidopsis thaliana DNA chromosome 4, contig fragment No. 10                                                                                          |
| 3920                   | 13829                 | 23609             | 1.92                 | 3.3E-01                                       | AF200446.1               | NT                            | Hypoxylon fragiforme chitin synthase gene, partial cds                                                                                                 |
| 4271                   | 14170                 |                   | 2.74                 | 3.3E-01                                       | D31662.1                 | NT                            | Rattus norvegicus DNA for regucalcin, partial cds                                                                                                      |
| 4589                   | 14477                 |                   | 1.48                 | 3.3E-01                                       | AI639114.1               | EST_HUMAN                     | tp78b12.x1 NCL_CGAP_U13 Homo sapiens cDNA clone IMAGE:2205407 3' similar to gp.X57522 ANTIGEN PEPTIDE TRANSPORT 1 (HUMAN);                             |
| 5263                   | 15185                 | 24960             | 2.68                 | 3.3E-01                                       | X89819.1                 | NT                            | R.norvegicus mRNA for 3'UTR of ubiquitin-like protein                                                                                                  |
| 5263                   | 15185                 | 24961             | 2.68                 | 3.3E-01                                       | X89819.1                 | NT                            | R.norvegicus mRNA for 3'UTR of ubiquitin-like protein                                                                                                  |
| 5622                   | 15537                 | 25623             | 2.71                 | 3.3E-01                                       | BE619650.1               | EST_HUMAN                     | 601472768T1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3875753 3'                                                                                        |
| 5622                   | 15537                 | 25624             | 2.71                 | 3.3E-01                                       | BE619650.1               | EST_HUMAN                     | 601472768T1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3875753 3'                                                                                        |
| 6117                   | 16011                 | 26148             | 3.64                 | 3.3E-01                                       | AI628131.1               | EST_HUMAN                     | ty64h01.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2285809 3' similar to contains Alu repetitive element; contains element L1 repetitive element; |
| 6117                   | 16011                 | 26149             | 3.64                 | 3.3E-01                                       | AI628131.1               | EST_HUMAN                     | ty64h01.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2285809 3' similar to contains Alu repetitive element; contains element L1 repetitive element; |
| 6575                   | 16433                 | 26616             | 1.5                  | 3.3E-01                                       | N85146.1                 | EST_HUMAN                     | J2498F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone J2498 5' similar to TEGT                                                          |
| 6981                   | 16858                 | 27053             | 19.46                | 3.3E-01                                       | BF683954.1               | EST_HUMAN                     | 602140372F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4301800 5'                                                                                        |
| 7477                   | 17337                 | 27542             | 3.26                 | 3.3E-01                                       | NG9866.1                 | EST_HUMAN                     | za67h01.s1 Soares fetal lung NBHL19W Homo sapiens cDNA clone IMAGE:297649 3'                                                                           |
| 7507                   | 17295                 | 27504             | 2.81                 | 3.3E-01                                       | BF376745.1               | EST_HUMAN                     | RC4-TN0077-250800-011-g04 TN0077 Homo sapiens cDNA                                                                                                     |
| 7739                   | 17589                 |                   | 2.07                 | 3.3E-01                                       | L41044.1                 | NT                            | Homo sapiens high-mobility group phosphoprotein (HMG1-C) gene, exons 1-3, complete cds                                                                 |
| 8104                   | 17994                 | 28242             | 2.71                 | 3.3E-01                                       | X63953.1                 | NT                            | D.mauritiana Adh gene                                                                                                                                  |
| 8104                   | 17994                 | 28243             | 2.71                 | 3.3E-01                                       | X63953.1                 | NT                            | D.mauritiana Adh gene                                                                                                                                  |
| 8399                   | 18265                 |                   | 1.82                 | 3.3E-01                                       | BF526499.1               | EST_HUMAN                     | 602070802F1 NCL_CGAP_Brn64 Homo sapiens cDNA clone IMAGE:4213585 5'                                                                                    |
| 8551                   | 18431                 | 28700             | 12.76                | 3.3E-01                                       | BE219351.1               | EST_HUMAN                     | inv51g02.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3176978 3'                                                                                     |